

Commerce


SOUTHERN TEXTILE BULLETIN

VOL. 28

CHARLOTTE, N. C., THURSDAY, AUGUST 6, 1925

NUMBER 23

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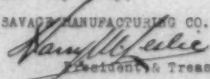
SAVAGE, MD.
New York, April 6, 1925.

Mr. A. H. Bahnson,
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Dear Sir:-

In reference to the Bahnson Humidifiers, which we recently installed in our Mill we wish to advise that there has been a vast improvement in the manufacturing of our Duck. Our yarns are running more even, and our customers are complimenting us on the appearance and quality of our cloth.

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Yours very truly,
SAVAGE MANUFACTURING CO.

President & Treasurer.

HML/M

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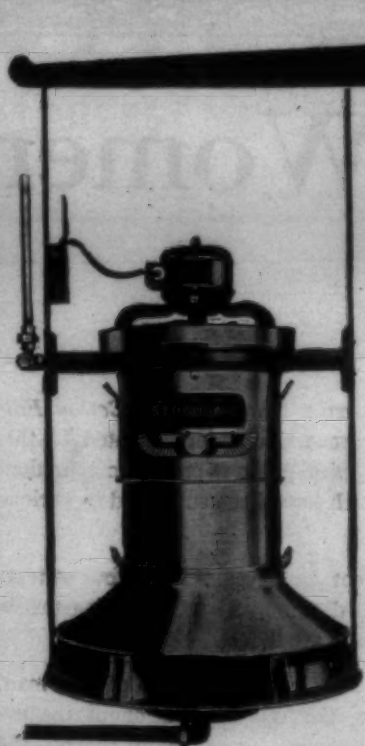
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"You will note the temperature did not exceed 89 degrees in this room, where we have 50,000 spindles and a flat gravel roof overhead. The writer has no doubt that the temperature in this room, would have reached at least 98 degrees if the conditions had prevailed as they were prior to the installation of your apparatus."

Yours very truly,
FITCHBURG YARN COMPANY,

June 22, 1923.
Fitchburg, Mass.

John H. Walling
Treasurer

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HOUGHTON

About Painted Women

by Chas. E. Carpenter,

Near Editor

WHEN I was a young man, the phrase "Painted Women", implied women of the unchaste class. But that was before the days of prohibition and the one-piece bathing suit. I see by the papers that a famous group of research archaeologists has discovered that women painted in the middle ages. I'll tell the World that women paint in the middle ages. It requires no archaeologist to convince me of that.

My objection to paint on a woman's face is the same as my objection to most of the warp conditioners. It is all on the surface. Paint on a woman's face never improved her soul, and the average warp conditioner does little to improve the interior of the warp. It leaves the size on the surface to flake off in the weaving operation.

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It is not the work and experience of one man, over a few years, but the compilation of the experience of many men, over many years—the author being the HOUGHTON RESEARCH STAFF and the publication being compiled from the HOUGHTON RESEARCH RECORDS.

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SOUTHERN TEXTILE BULLETIN

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Imports of Textiles Gain During Year

United States imports of textile fibres and textiles during the year ended June 30, 1925, were valued at \$971,645,000—a gain of \$101,000,000, or 11.6 per cent, over the total for the previous 12 months, according to the Textile Division, Department of Commerce. The bulk of this increase is accounted for by larger purchases of textile raw materials abroad. (The "year" used throughout this review is the fiscal year ending June 30 except where stated otherwise.)

Heavy Imports of Raw Wool.

Imports of raw wool during 1925 aggregated 280,898,000 pounds valued \$122,306,000, compared with 234,198,000 pounds with a value of \$75,420,000 entered during the preceding year. Carpet wool comprised approximately 50 per cent of the total volume of wool imports in both periods, but receipts during 1925 exceeded those for 1924 by more than 20,000,000 pounds. The greatest percentage of gain was recorded in clothing wool, imports of which rose from 12,820,000 pounds in 1924 to 24,446,000 pounds in 1925. Wool entered as combing wool amounted to 117,991,000 pounds in 1925, compared with 103,003,000 for the previous 12 months. China supplied 56,591,000 pounds of the carpet wool imported in 1925, and 45,521,000 pounds came from the United Kingdom, which also furnished 6,882,000 pounds of clothing wool and 19,537,000 pounds of combing wool. Australia was the principal source of the imports of combing wool, followed by the United Kingdom, Argentina, and Uruguay. Argentina supplied slightly over 30 per cent of the imports of clothing wool, the United Kingdom being in second place.

Receipts of Raw Silk Set High Record.

Imports of raw silk during 1925 totaled 59,138,000 pounds, valued, at \$353,149,000, an increase of 28 per cent in volume, as compared with the previous 12 months, and the highest quantity ever entering the United States during any year, either fiscal or calendar. Comparative figures for preceding fiscal years are as follows 1924, 46,172,000 pounds; 1923, 52,648,000 pounds; 1922, 48,179,000 pounds; 1921, 29,463,000 pounds. The average import price per pound was: 1925, \$5.97; 1924,

\$7.58; 1923, \$7.70; 1922, \$3.24; 1921, \$6.17.

The heavy imports of raw silk during 1925 may be attributed to its comparatively low cost during this period and the popularity of silk for women's garments. During the calendar year 1924 consumption of raw silk did not keep pace with imports, and at the end of December the stocks in warehouses amounted to 6,533 bales, the largest volume since the post-war period of inflation. By the end of June, 1925, however, the stocks in warehouses had been reduced to 44,016 bales. In June, 1924, warehouse stocks aggregated 24,843 bales.

Notwithstanding that United States production of rayon has mounted from 1,566,000 pounds in the calendar year 1913 to 38,850,000 pounds in 1924, and that the output for 1925 promises to equal and perhaps exceed the 1924 figures, deliveries of raw silk to the mills increased from a monthly average of 28,346 bales for the fiscal year 1924 to 36,641 for the 12 months ended June, 1925. Inasmuch as mill deliveries afford a fairly accurate index of activity in the American silk industry, this seemingly would indicate that rayon is not supplanting silk to any large extent in the United States.

Increase in Cotton and Other Vegetable Fibers.

United States imports of raw cotton increased from 146,024,000 pounds valued at \$43,761,000 during 1924 to 155,092,000 pounds and \$50,000,000 of the quantity entered 640,000 for 1925. Approximately this year was classed as long staple (1½ inches and over). The principal sources of the 1925 cotton imports were: Egypt, 91,930,000 pounds; Mexico, 22,287,000; China, 15,942,000; British India, 13,044,000; Peru, 5,678,000.

Imports of jute and jute butts declined from 83,711 tons for 1924 to 56,313 during 1925, but the value increased from \$8,587,821 to \$9,407,765. The United States, however, imports the greater part of its jute requirements in the form of burlap, which in point of value ranks next to raw silk and the total of all classes of wool as the largest single item of import. The United States purchased 581,710,000 pounds of

burlaps valued at \$72,572,000 in 1925, compared with 602,801,000 pounds and \$59,177,562 in the preceding 12 months. During 1925, 510,087,000 pounds of burlaps valued at \$61,948,000 were imported direct from British India.

American foreign purchases of other vegetable fibers amounted to 251,224 tons valued at \$47,573,000 in 1925, compared with 227,426 tons, worth \$31,820,000, for the preceding 12 months. The principal increase occurred in imports of sisal, which rose from 96,969 tons with a value of \$11,801,000 in 1924 to 145,981 tons valued at \$23,023,000 in 1925. Receipts of manila declined from 98,032 tons in 1924 to 72,915, but the total value was influenced by the higher price of this fiber in 1925 and rose from \$13,525,000 in 1924 to \$17,266,000 in 1925. In addition to these fibers there were imported during 1925 4,135 tons of flax and 2,959 tons of hemp.

Principal Kinds of Cotton Cloth Imported.

The following table shows the principal kind of cotton cloth imported in 1925 through the customs districts of New York, Boston, Philadelphia, Chicago, and San Francisco:

United States imports of cotton cloth through New York, Boston, Philadelphia, Chicago, and San Francisco, year ended June 30 1925.

Printed, colored, or fancy woven	5,648,000	1,190,476
Sateens woven with 8 or more harnesses:		
Unbleached and bleached	1,153,789	288,491
Printed, colored, or fancy woven	2,794,718	999,299
Voiles, plain or fancy	5,426,275	1,095,884
Crepes, plain or fancy	5,607,316	909,232
Ratines	377,651	131,231
Dotted swisses	278,727	96,867
All jacquard-woven cloths other than swivels or lappets	641,518	330,003
Ginghams, two or more colors	1,318,185	384,732
Total	138,898,415	\$29,710,871
Description	Square Yards	Value
Lawns, organdies, and similar fine goods of average yarn number above 40	11,449,835	\$2,908,188
Poplins and broadcloths:		
Unbleached	87,824,562	17,138,859
Bleached and colored	8,167,560	2,731,239
Sateens woven with not more than 7 harnesses:		
Unbleached	7,941,706	1,450,317
Bleached	267,877	56,053

Imports of cotton manufactures during 1925 amounted to \$87,859,000, compared with \$92,067,000 for the previous 12 months. Cotton cloth

constituted about two-fifths of these imports in 1925; laces and embroideries accounted for almost \$20,000,000, cotton wearing apparel for \$11,000,000, and cotton yarn for \$5,000,000, the balance comprising cotton waste and various other manufacture of cotton.

A decline was registered in cotton cloths, imports of which dropped from 198,970,000 square yards valued at \$41,631,000 for 1924 to 156,428,000 square yards with a value of \$34,474,000 during 1925. The increase in receipts of gray goods from 100,073,000 square yards in 1924 to 113,384,000 in 1925 was offset by decreases in colored, printed and woven figured goods from 90,520,000 square yards to 38,432,000 and in bleached goods from 8,377,000 square yards to 4,613,000.

Approximately 89 per cent of the total imports of cotton cloth entered through the customs districts of New York, Boston, Philadelphia, Chicago, and San Francisco, the aggregate for these districts being 138,898,000 square yards, of which 87,824,562 were unbleached poplins and broadcloths. Monthly entries through these districts have shown a sharp decline, which is partly seasonal, since January receipts amounted to 18,683,000 square yards while the June figure was 4,254,000.

The bulk of the United States imports of cotton cloth, its share having been 167,681,000 square yards, valued

The United Kingdom supplies the

(Continued on Page 31)

Celanese---An Important Southern Industry

SOUTHERN textile men will be interested in the recent announcement that the American Cellulose & Chemical Manufacturing Co., Ltd., has opened an office at 1116 Johnson Building, Charlotte, North Carolina. This step is tangible evidence of the company's policy of placing its facilities and its product more and more completely at the service of Southern textile mills.

The office has been placed in charge of Mr. Todd B. Meisenheimer, who is widely known throughout the industry. Meisenheimer reports an exceedingly active demand for Celanese in this territory and a most cordial attitude toward the company on the part of the textile mills of the South, a very large proportion of which are already users, in large or small degree, of this new yarn. Indeed, with this new office, situated in one of the most important textile centers of the South, and with its large modern plant at Am-

By a Representative of the American Cellulose & Chemical Manufacturing Company.

and is measuring up to the exacting standards that are maintained at the Celanese plant, the working force will be steadily augmented and the volume of production may be expected to increase rapidly during the next twelve months.

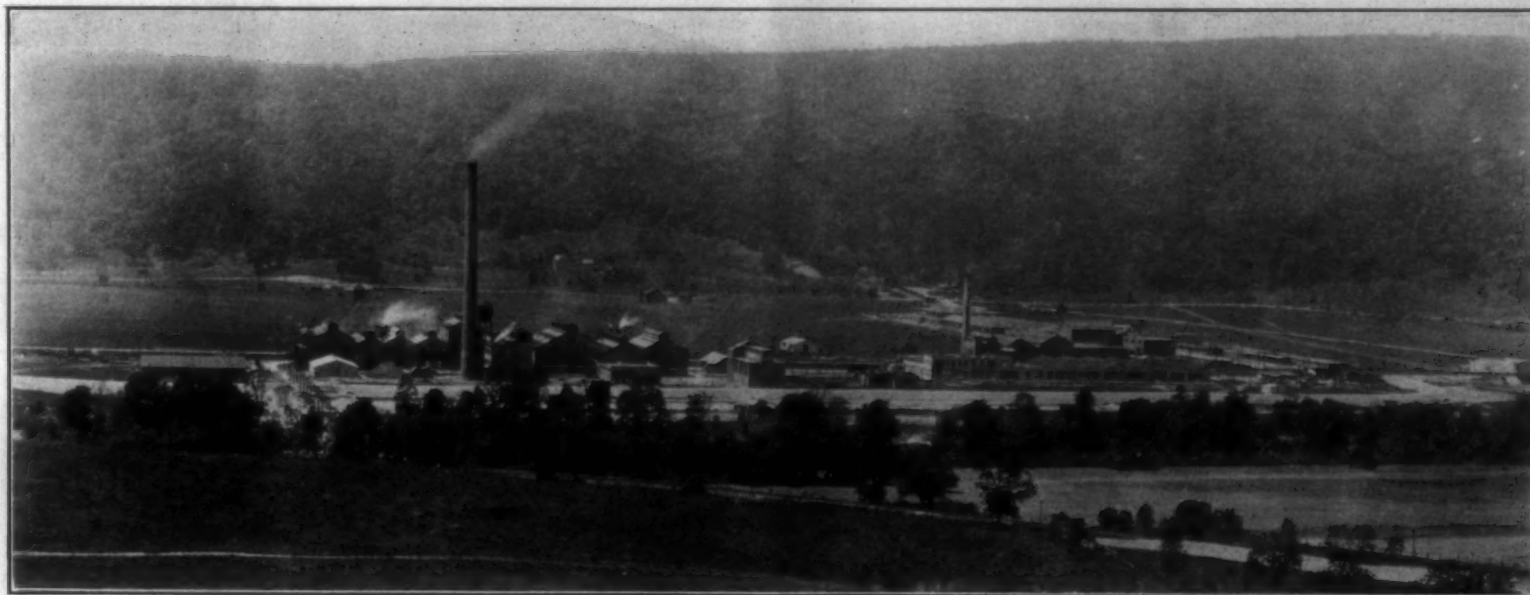
Celanese yarn is already so well known and so widely used in every department of the textile industry, that it is unnecessary to dwell here upon its unique characteristics. Notable for its strength and elasticity, its lustrous beauty and its delicious silken "feel" it has already demonstrated its wide adaptability and usefulness in the production of every sort of high grade fabric from the sheerest of chiffons to the most elaborate of drapery materials.

But perhaps the many economies that are made possible by the use of this remarkable fiber are not

production of widely differing types of fabrics. The knitter for instance finds that he can spray Celanese with water or use it under humid atmospheric conditions and that it will not become soft and pulpy. It retains its strength and increases the ease and efficiency of his operations. The weaver finds that the uniform size of the yarn is of great advantage to him in the production of all kinds of fabrics and that after the dyeing operation he has a fabric absolutely unmarred by the streakiness that so often results from the use of yarns of uneven denier.

The remarkable cross dyeing possibilities when Celanese is used in combination with other yarns, have long been widely appreciated in the industry, but of late more and more manufacturers have been turning their attention to the production of

alive and beneficial effects of an ultra-violet ray bath. The extraordinarily low moisture content of Celanese is another feature that is arousing much interest from the hygienic standpoint. Artificial silk, in its normal condition contains approximately 11 per cent of moisture, and of course absorbs much more under humid atmospheric conditions. Celanese contains only 4 per cent of moisture and does not absorb moisture. This fact is considered by many to make Celanese the ideal fabric for wear next to the skin. The danger of colds resulting from perspiration-absorbing underclothing is removed entirely by the use of Celanese. Again, Celanese being a non-conductor of electricity which is constantly being generated by the skin. These are interesting properties and of course play their part in making for the easier saleability of fabrics made from Celanese.



Plant of American Cellulose & Chemical Manufacturing Company.

celle, near Cumberland, Maryland, the American Cellulose & Chemical Manufacturing Company, Ltd., may properly be regarded as essentially a Southern industry and destined to play an important part in the notable development of the South.

Although Celanese and the S. R. A. dyes have been known and used in this country for several years, it was not until the early months of 1925 that the company began domestic production. Today the Amcelle plant, situated in the beautiful mountain region of Maryland, is already turning out between 2,000 and 3,000 pounds of yarn a day and making rapid strides toward attaining full production capacity. An important phase of its manufacturing problems is the problem of personnel. Starting with a nucleus of skilled technical workers from England, it has developed steadily a large staff of American operatives trained in the various processes that enter into the production of Celanese. Now that this high-grade American labor has become skilled

yet fully appreciated by the industry as a whole. For instance, the manufacturers of Celanese are in a position to enable their customers to effect important savings in their winding departments by delivering Celanese wound direct on 5-inch weaving cops at as cost of only 10 cents per pound. The mill that does its own winding, as well as the mill that has it done outside can make important savings not only in actual money cost, but in increased plant efficiency due to the elimination of one complete winding operation, by taking advantage of this service which the makers of Celanese afford.

Similarly, the inherent characteristics of the yarn—its high tensile strength, its imperviousness to water (Celanese has remained immersed in salt water for months without losing more than a fraction of a per cent in tensile strength) its elasticity and its uniformity as to size and quality—make it easy to process through the mill and satisfactory use for the

fabrics in which Celanese is used in the warp as well as in the filling. The fact that Celanese is readily obtainable in 45 denier has meant much in both the knitting and weaving trades; and the recent development of a 75 denier yarn composed of 20 filaments (as against the usual 13 in a yarn of this denier) is leading to a wider use of the fibre in such constructions as satins and rapiers.

A new and extremely interesting aspect of the Celanese question has recently been brought to the attention of the public. We refer to the hygienic properties of the yarn. It has been brought out, for example, that Celanese is transparent to ultra-violet light, and that although the full intensity of the sun's rays is broken up by reflection, these mysterious health-bringing ultra-violet rays penetrate to the body, even through several thicknesses of fabric. Ordinary clothing prevents ultra-violet rays from reaching the body, whereas the wearer of Celanese garments receives all the cur-

The rapidly growing popularity of Celanese is strikingly attested by the manner in which it is being featured by prominent retailers throughout the country. Such prominent establishments as Franklin Simon & Co., and Bonwit Teller & Co. of New York, R. H. Stearns of Boston, Strawbridge & Clothier of Philadelphia—to mention but a few—have not only featured underwear and dresses of Celanese but have advertised them and recommended Celanese to their customers guaranteeing it as to washability, etc. Much importance has been attached by these stores to the unique Celanese white, which always remains white and does not turn yellow. It is evident today that among retailers and manufacturers throughout the country, Celanese is being accorded a place all its own in the textile field—as a yarn that is neither artificial silk nor rayon but an individual fibre with properties not possessed by other artificial yarns which render it widely useful in every branch of the textile industry.



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Weaving Artificial Silk

DURING the last few years there has been an increasing demand for fabrics of which artificial silk forms a part. This is due in no small degree to the fact that its attractive lustre, combined with the undoubtedly improved wearing and washing qualities of the yarns in recent years, has broken down the prejudice which it had to meet at the outset. The efforts made by the producers to render the yarn more perfect and more widely applicable have induced many manufacturers to adopt it as one of their staple articles. These manufacturers have not only devoted themselves to the production of a wide range of cloths in which artificial silk is the chief attraction or ornament, but have also devoted considerable attention to finding the best means of manipulating it. This has resulted in an increased demand by both the home and shipping markets for goods of this description. Probably the late war interfered to some extent with the progress in artificial silk manufacture, but now that things are working normally, a great expansion in the use of this material is taking place.

An indication of the methods of manipulation which experience has

proved to be useful and reliable, will be of service at this time. For weaving purposes artificial silk may be used in the form of either deft or warp or both. The former method presents fewer difficulties than the latter, and is by far the one most frequently used. The best results are obtained with artificial silk weft when it is wound on to specially prepared tubes about $4\frac{1}{2}$ inches in length and $\frac{3}{4}$ inch in diameter, this being now accepted as the universal size, made from unpolished paper free from roughness and with indented rings at intervals to prevent the yarn from slipping off. The winding should be very firm, and if possible, knotless.

If knots have to be made they should be run to the outside of the slope. When knots occur at the base, or part of the way down the slope, they are a source of continual trouble, as the loosely twisted fibres (twist would diminish the lustre) of the yarn catch on the knot as the thread is drawn away, and either causes the weft pick to break or causes a number of tight picks in the cloth. These tight picks show very distinctly in cloths woven with all artificial silk weft and appear to be of different counts and lustre to

the remaining portion, giving a frayed and uneven character to the cloth. When knots do occur in the yarn, the best thing the weaver can do when the weft breaks upon it is to unravel the thread until the knot is drawn off. If the cloth is a very expensive one, and one in which slack and tight packs are obtainable, the winder should have instructions to grade the tubes into knotless and other grades according to the number of knots which each contain. The type of knot, which holds best for artificial silk, is the "tension" knot.

When a suitable cop or tube of yarn has been secured, the loom shuttle should be specially prepared to receive it. When artificial silk is woven in an ordinary shuttle, various faults arise which are solely due to the smooth, springy, and slippery character of the material. This allows the yarn to unravel or unwind too freely, thereby causing curls, slack picks, fringed selvages, stoppages of the loom, and dirty places in the weft.

The ordinary method of placing a brush of worsted yarn in the eye of the shuttle to prevent weft curling is not sufficiently effective, and the method of fixing stiff fibre brushes

in the shuttle so as to press against the bottom of the spool—as is often done when weaving polished cotton weft—is too harsh for the delicate fibres which form the artificial silk yarn, and causes a rough, inferior thread.

Experience has shown that the best results are obtained by some arrangement which will exert a slight and even pressure upon every coil of yarn as it is unwound from the tube, so that it will never have the opportunity to fly and become wild, or slip. One method is to fix the end of an elastic tape about $\frac{1}{4}$ inch wide into the side of the shuttle a little behind the base of the tube, and the other end into the bottom of the shuttle near to the pot-eye, and draw it tight enough to press against the yarn for the whole length of the tube. This is a very effective method, and answers admirably until the elastic becomes either frayed or slack, when it must be renewed.

Another and preferable method is to place a piece of velvet or rabbit skin along each side of the shuttle in such a way that the tube of yarn lies easily upon it and adjusts the tension on the weft. This velvet or

(Continued on Page 34)



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A word to the contestants

Names were submitted from every walk of life in the textile industry.

Overseers, superintendents, mill men from every mill department, the men in the offices, the executive, such as presidents, vice-presidents, secretaries, etc., girls in the mills and offices, and members of the families of textile mill people all took part. Names came in from every state in the Union and five foreign countries. Some submitted one name while others submitted many names. Altogether thousands of names were submitted.

Many of these names were accompanied by beautiful sketches and drawings, some of which were very fine indeed and showed real artistic ability.

Hundreds of the contestants were men actually working with spinning belts and all of these men were glad to know that a new and better belt was available for spinning frame drives. The courtesy, warmth and genuine hospitality of the contestants was shown in their letters and the Chicago Belting Company never can adequately express their full appreciation and thanks.

How the Winning Name Was Selected

When the names were received each contestant was given a number. This number was written on the letter and on the sheet containing the names and the suggested name and number only were copied onto a separate sheet of paper. Then the original names and letters were locked in the safe so that when our contest closed the judges received just a long list of names with each name having a separate number.

It was impossible for the judges to tell who had submitted any name, without looking up the letter—and these were locked in the safe until the winning name was selected.

The judges received the names and numbers only and none of the judges had any idea of who the winner would be until after the winning name had been selected.

The winning name

for the Chicago Belting Company's
new spinning belt is

Yarnmaker

submitted by

Mr. B. R. Cole

of the Micolas Cotton Mills
of Opp, Alabama

Mr. H. G. Lord, President of the Textile World, Mr. David Clark, Managing Editor of the Southern Textile Bulletin, and Mr. Edward H. Ball, President of the Chicago Belting Company, who were the judges in the name contest—selected the name YARNMAKER as the winning name and rewarded the prize of \$500.00 to Mr. B. R. Cole, of the Micolas Cotton Mills, at Opp, Ala.

The judges report

The judges report that they had great difficulty in selecting the winning name, as there were so many fine names submitted, any one of which would have been a good name for a spinning frame drive belt. In selecting the winning name the judges took into consideration whether or not the name could be registered, as the Government has certain laws and rules that must be observed in the selection of trademarks. They also considered whether or not the name submitted was at present used for any other belt brand—as they were required to select a new name, the general character of the name, how appropriate it would be as the name of a spinning frame drive belt and the character of the 25 to 50 word reason given by the contestant for submitting each name.

The new Yarnmaker Belting

The new Yarnmaker belting fills a long felt want—which sounds very old fashioned but is nevertheless very true. These belts have already demonstrated that they will give more production and last longer in service. They take hold as soon as you start up. They have as little stretch as a high leather belting can possibly have. They are oil proof and the surface that grips the pulley is remarkable for its great adhesion which prevents slipping and keeps the front rolls up to speed.

Made by the Pre-tested method

Yarnmaker belting is made by the Chicago Belting Company's well known pre-tested method—a method of applying scientific production methods to the manufacture of standardized leather belting that has written a new chapter in the history of leather belt transmission. Already industry after industry has adopted Chicago Belting Company belts made by the pre-tested method and to each industry these finely made belts have brought a new belting efficiency and established new records for service.

Yarnmaker belting is made specially for spinning frame drives and was developed expressly for that one drive only by the Research Laboratory of the Chicago Belting Company.

Chicago Belting Company

NEW YORK BOSTON PITTSBURGH CLEVELAND MILWAUKEE ROCKFORD
Manufacturers of Leather Belting
122 NORTH GREEN STREET CHICAGO, U.S.A.
NEW ORLEANS LOS ANGELES SAN FRANCISCO PORTLAND ORE. SEATTLE, WASH. ATLANTA

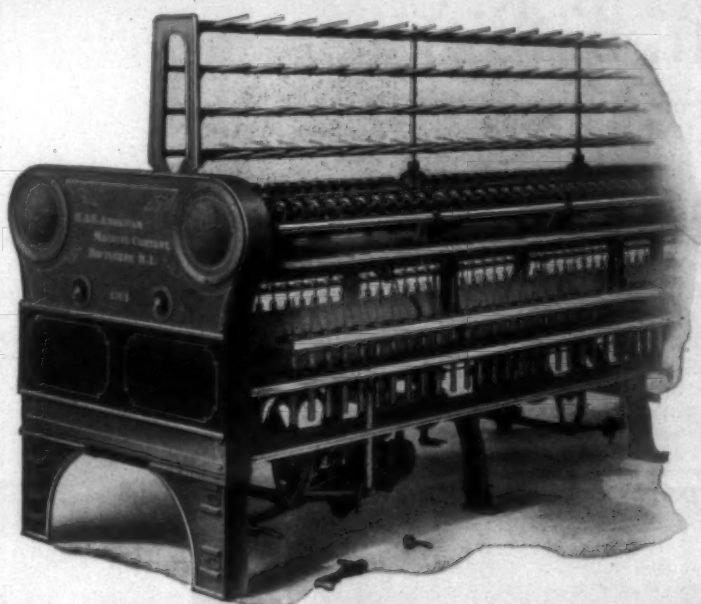
Chicago Belting

Made by the pre-tested method

COTTON MACHINERY

IMPROVED TWISTERS

FOR WET OR DRY TWISTING



The illustration above shows the Head End Section of our Improved Twister. This machine, like our Spinning Frame, is of Heavy Construction, which insures light running and reduces vibration and cost of upkeep. We build these machines in all Gauges and for any number of ply with either Band or Tape Drive. There are many distinctive features in our machine which we describe in a Special Bulletin.

*List of Users and Descriptive Bulletin
sent on request*

H & B

American Machine Co.

Pawtucket, R. I.

Southern Office

814-816 Atlanta Trust Co. Bldg.

Atlanta, Ga.

Improvement in Humidifier Apparatus

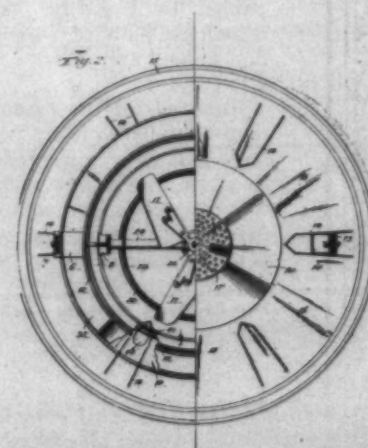
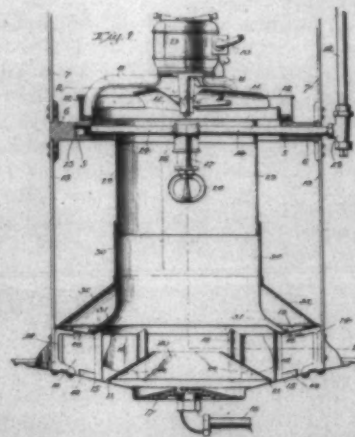
WILLIAM B. HODGE, of Charlotte, has invented certain improvements in humidifiers, of which the following is a specification:

This invention relates to air conditioning and particularly to a method of and apparatus for humidifying air. The invention relates to that general method of humidification in which the humidifier is mounted in the room, whose air is to be humidified, and in which air drawn from the room is passed through the humidifying head and then discharged into the room.

In designing devices of this character, the constant effort has been to reduce the size of the device and to reduce the number of devices required for a given cubic volume and this effort necessarily implies an increased evaporative rate and an increased radius of action for each humidifying head.

Devices of this character have gone into successful use but have required considerable maintenance care because when used in a dirty atmosphere, such as is encountered in cotton mills, the duct for the untreated high velocity air current soon became progressively clogged, thus progressively reducing the efficiency of the device, unless it was cleaned at frequent intervals.

The desire to avoid this maintenance difficulty led me to eliminate the high velocity air duct characteristic of the prior art and to substitute therefor a high velocity free air current flowing outside the humidifier head in a path transverse to the discharging slow moving air current. Not only did this change avoid the maintenance difficulty which suggested it, but it resulted in a remarkable and unexpected increase in the evaporative rate, the



The limiting factors on such reduction of size and number of heads have been the tendency of high velocity air currents to carry large drops of water into the room and there precipitate them, and the tendency of the treated air to recirculate, that is to say, to flow directly from the discharge back to the intake of the humidifier. This last tendency limits the evaporative rate of the device and its radius of action.

Prior to the present invention it had been determined that the velocity of the air, as it passed the water spraying device, was a controlling factor in the tendency of the air current to set large drops of water into motion toward the discharge. This led to the development of an improved type of humidifier in which a slow current of air was surcharged with finely divided moisture and then passed through an eliminator to remove large drops, after which this slow flowing current, surcharged with moisture, was mixed within the device with a faster moving current of unhumidified air which assimilated the excess moisture in the slow moving current, and gave a resultant rate of outflow sufficiently high to give a relatively wide radius of action to the head and to prevent in a large degree the harmful tendency towards recirculation.

increase being approximately 60 per cent over the best previous performance known to me.

The study of the performance of the device when operated at its highest evaporative efficiency led to the discovery that it involves a new operative principle or method. Generally stated, this method in its relatively slow moving air current with finely divided moisture particles, then passing the slow moving air current through an eliminator to remove any large particles of moisture and discharging this air current into a rapidly moving air current flowing in the air of the room itself. The two currents are so directed transversely to each other as to produce intimate mixing and the directions of flow of the two currents are so correlated that the direction of the resulting mixed stream is favorable to wide dissemination of the treated air and unfavorable to recirculatory flow.

From the apparatus standpoint, the invention also offers marked advantages for the reason that the casing structure may be greatly simplified and that a single fan may be adapted by proper design to produce both the air currents required in the operation of the device.

The preferred device for carrying out the invention is illustrated in

(Continued on Page 32)

*The better to serve
our Southern customers---*

THE AMERICAN CELLULOSE & CHEMICAL
MANUFACTURING COMPANY, LTD., announces
the opening of offices at

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Charlotte, N. C.

Mr. Todd B. Meisenheimer

has been appointed selling representative
and is at your service

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BRAND YARN

**The American Cellulose & Chemical
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WORKS AT AMCELLE (NEAR CUMBERLAND), MARYLAND

CELANESE is the registered trademark in the United States of The American
Cellulose & Chemical Manufacturing Company, Ltd., to designate its brand
of yarns, fabrics, garments, etc.

Research Work in Finishing

RESEARCH work bearing on the many problems connected with the bleaching, dyeing, and finishing branches of the textile industry is nowadays going on at a rapid rate, and though British investigators in these directions are well to the forefront it is not unprofitable to turn attention to recent Continental reports.

Most of the theoretical considerations that have been proposed in regard to the operations of scouring, bleaching, mercerizing, and dyeing have by now become fairly widely accepted in fact, and though more may yet be said in respect of these, since all remain open for further elucidation and extension, recent work is of special interest.

Interesting pronouncements on the nature of dyeing processes in general, and of vat-dyeing in particular; the dyeing of acetyl silk; the effects of sunlight on wool; and the subjects of the structure of cellulose, and of the detection and determination of oxy-cellulose, were made at the annual congress of the International Society of Textile Chemists (Chemiker - Koloristen) held in Zurich in May. It may be remarked that this society, which was inaugurated some years ago with very small beginnings, has grown steadily till at the present time it counts some 800 members. The headquarters are in Vienna, and the annual meetings are held in a different town each year. At this year's meeting the chemical staffs of the University and of the Federal Technical High School were largely in evidence, some of the professors having been asked to contribute papers. There was an attendance of from 250 to 300 members, an indication of the prestige of the society.

Oxycellulose.

In the bleaching of cotton "tendering" is at times a matter of great concern to the bleacher, the manufacturer, and the merchant, and formed the subject, as expressed in the term oxycellulose, of three out of the many papers contributed. In one paper Professor Kaufmann discussed the various methods for the quantitative estimation of oxycellulose, and dismissed the methylene blue method as unsuitable for various reasons, of which the principal one given was that cotton tendered by acids also showed an increased affinity for this dyestuff. Schwalbe's method was also considered to show a possible weakness, in that the oxycellulose was liable to be chemically changed by the caustic alkali before the action of the copper solution was complete.

By titrating the caustic soda extracts with permanganate of potash, in presence of sulphuric acid, a more reliable estimate could be obtained, but he has recently found it more convenient to dissolve a known weight of the damaged fabric in 70 per cent sulphuric acid and to titrate the solution directly with permanganate. From his results this author concludes that the composition of oxycellulose corresponds to the formula $C_6H_{10}O_7.5$.

In another paper Professor Ristenpart, treating on the detection of oxycellulose in dyed fabrics, recommended the following method, which at the same time gave an indication of the extent of the oxidation:—0.5 gram of the dyed cotton-fabric is boiled for five minutes with Fehling's solution. The solution is then filtered, the residue washed, and the cuprous oxide dissolved out by nitric acid. This solution is evaporated to dryness and the dish heated to redness. The cupric oxide is then taken up by fusion with bisulphate of potash, the solution is rendered ammoniacal, and made up to 10cc. In this the copper is estimated colorimetrically.

A highly interesting contribution to our knowledge of cotton cellulose damaged by excessive oxidation was made by Professor E. Knecht, of the Manchester College of Technology, who gave an account of a series of experiments which had been carried out with carefully bleached cotton which had been oxidized by the acid permanganate method with amounts of oxygen varying from 0.025 to 1 atom of oxygen per $C_6H_{10}O_5$ unit. In each instance the amount of cellulose remaining in the oxycellulose was estimated by the osazone method, the results being checked in one case by means of Fehling's solution and in several others by means of the new methylene blue oxidation method of estimating glucose.

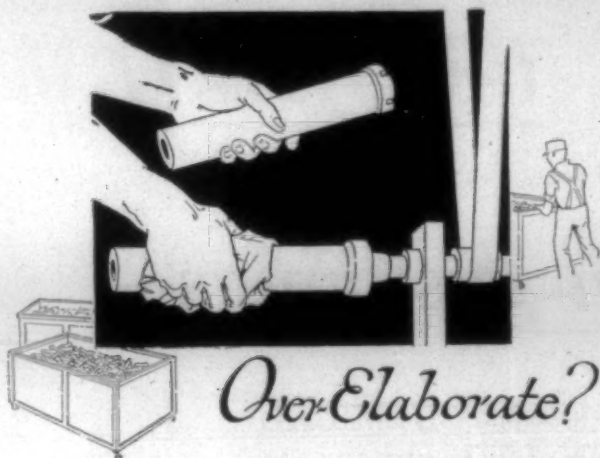
It was found that though the yield of oxycellulose obtained after oxidation with one atom of oxygen was between 92 and 94.5 per cent of the cotton employed the amount of cellulose in the oxycellulose did not exceed 50 per cent. The amounts of cellulose found by the osazone method in the less oxidized products were in an inverse proportion to the degree of oxidation.

It was further pointed out that in oxidizing bleached cotton by the acid permanganate process small amounts of carbonic acid were formed, and that these amounts were apparently in a direct ratio to the degree of oxidation. Where the degree of oxidation was excessive the osazone method was preferred to the estimation of the copper number, but where the oxidation was slight, the author recommended the estimation of the copper-number by one of the modifications of Schwalbe's method described by Knecht and Thompson.

The Nature of Dyeing Processes.

Professor Haller gave the results of some recent research work on the nature of dyeing processes, instancing direct measurements he had made under the microscope of the swelling of wetted cotton fibres. The fibres were thus found to undergo an increase in breadth of 16 per cent, while if mordanted with tannin and tartar emetic and then dyed in methylene blue the increase amounted to 17.2 per cent. With regard to the dyeing of cotton with insoluble azo-dyes, mordant dyes, and vat-dyes, it is generally admitted that these are precipitated as

(Continued on Page 26)



Before we call it finished, each Jordan Bobbin receives two, and often three, coats of shellac. Each coat is thoroughly rubbed-in.

Merely the first coat makes the bobbin seem smooth as glass and high in polish. According to usual standards, further shellacking might be thought over-elaborate.

But, for our name's sake alone, we prefer to do things rather better than seems necessary, and so a good ordinary finish is not quite good enough for us.

We want Jordan finish to be as close to flawless as our precision is close to absolute.

JORDAN MANUFACTURING COMPANY

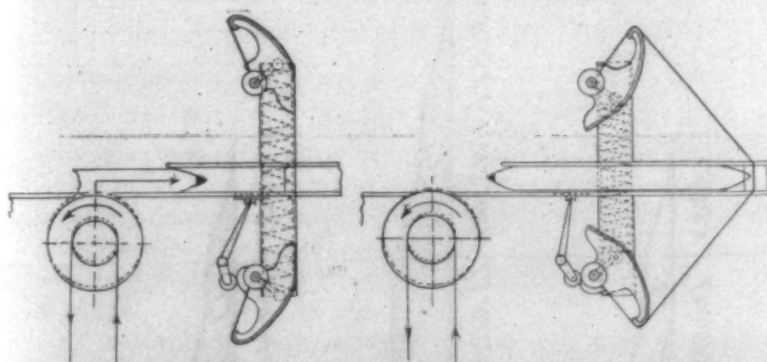
Monticello Georgia
Finishing Mills at Toecane, N. C.
and Monticello, Ga.

Jordan
Precision **Bobbins**

The Souczek Shuttle Drive

Innumerable attempts have been made to design a new or improved method of picking. It has long been argued that the present widely-adopted method is economically and mechanically bad. But no very real improvement has been forthcoming. Recently, the Souczek shuttle drive has been introduced for which considerable claims are made. It is an Austrian invention, and certainly possesses many novel and interesting features. By its employment the inventor claims many advantages, including high speed of loom (280 picks a minute have been run without any

driven in a clockwise direction and side of the lathe must be endlessly the roll on the right-hand side in an anti-clockwise direction, with a speed corresponding to the necessary shuttle velocity. This is accomplished by means of a narrow belt. The active power stored in each roller is so great that, when once it had been made to revolve, it is able without any drive, that is to say solely by its own rotary power, to throw the shuttle several times through the shed. As however, the roller is endlessly driven, the belt driving it has sufficient time to replace the energy given off to the

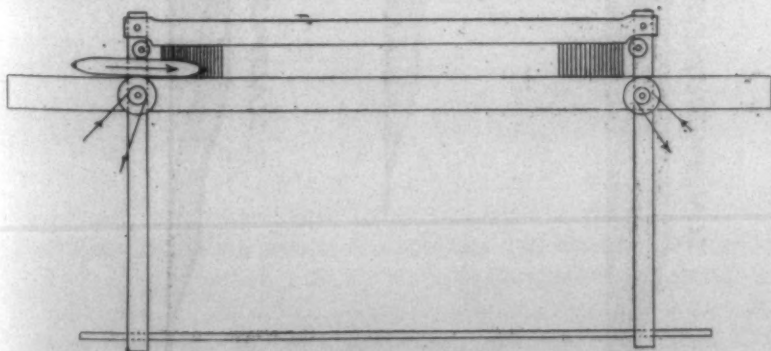


SOUCZEK LOOM

noticeable vibration); saving in power; smooth running; extremely flexible or elastic throwing and stoppage of the shuttle whereby breakages in weft cops are obviated; and reduction in breakages in warp and weft. The invention presents such remarkable features that the description sent here from Austria is printed almost in full. The princi-

ple of the drive is based on the power necessary for the throw of the shuttle for one throw, before another throw has to take place.

A further claimed advantage of the Souczek shuttle drive consists in the fact that the active power still contained in the shuttle when it runs into the shuttle box is not destroyed, as is the ordinary method, but is taken up and used for the shuttle throw in the opposite



SOUCZEK LOOM

ple of the drive is based on the power necessary for the throw of the shuttle being taken direct, without any intermediary, by the shuttle from a rotating mass. For this purpose there is an endlessly driven roller, with high rotating power at both ends of the lathe; the roller engages the shuttle in a suitable manner and transmits a velocity to it which corresponding to the circumference velocity of the roller. Both the rollers are sunk into the lathe and only project out of the lathe path for the short time taken for the throw of the shuttle. Accordingly the roll on the left-hand

direction, thus also relieving the roller. The power obtained in this manner also serves to draw the catches hold of it whilst in flight shuttle to the roll, which latter and transmits the full and essential speed to it.

The interception mechanism is shown in the attached sketch. The belt, perpendicularly stretched through the shuttle box by springs, is further stretched by the incoming shuttle, and transmits its energy to these springs. Becoming inanimate, the shuttle is held automatically in the shuttle box until next shuttle throw.



Every belt backed by 90 years' experience

BACK in 1835 J. B. Hoyt founded the business that has grown into Edw. R. Ladew Co., Inc.

Determined to produce the finest leather belts, he originated the practice of using selected cuts, carefully matched, instead of the run of the hide. He developed the lap joint that permitted the making of the endless belt.

Stretching leather *before* it went into the belt was his idea. The first waterproof leather belt and the cement that made it possible were both his work. He made countless other discoveries and improvements, many still the exclusive property of Ladew.

This record of experience and leadership guarantees you belts that are right in every respect. Send in the coupon today for your copy of "The Proof Book." It will cut belting costs in your plant.

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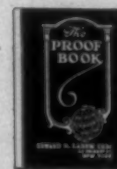
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Please send me a copy of "The Proof Book" and full information about Ladew Leather Belting.



Name _____

Company _____

Address _____

102-G



Profits in a glutted market

LIKE other concerns in the South, the Mansfield Mills, Inc., at Lumberton, N. C., were makers of yarns. They owned several mills whose product was sold to other concerns for manufacture into cloth.

The yarn market collapsed. A glutted market threatened to keep their mills idle. This was the situation we found when we were asked to co-operate.

Careful analysis of textile conditions showed that it would be desirable for our client to weave the yarns they made, and sell the resulting product in finished form.

We reorganized the old units according to this plan. Today this client is an important step nearer the consumer, and freed from the menace of a glutted market.

Lockwood-Greene service is designed to meet every requirement of industry. The Lockwood-Greene organization includes men of broad business and financial experience as well as engineering skill. From the preliminary study of markets and manufacturing, to the delivery of the finished plant, Lockwood, Greene & Co. offer you a service that is sound both commercially and technically.

Let our representative discuss with you the details of *your* special problem. No project is too large or too small to receive thorough attention.

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NEW YORK
CLEVELAND
ATLANTA
SPARTANBURG

Cotton Mill Processes and Calculations

By D. A. Tompkins.

Copy Revised for Third Edition.

(Continued from Last Week)

Figure 14 is a diagram to show the general principles of the piecing up. In the upper part of the figure, the sheet is shown passing from the detaching roll on the left, across the line to the right. Observe that the rear end of D has just crossed the line. The centre of the figure shows the next step. The rear end of D has backed across the line to the left a certain distance, so it can splice to the front end of the

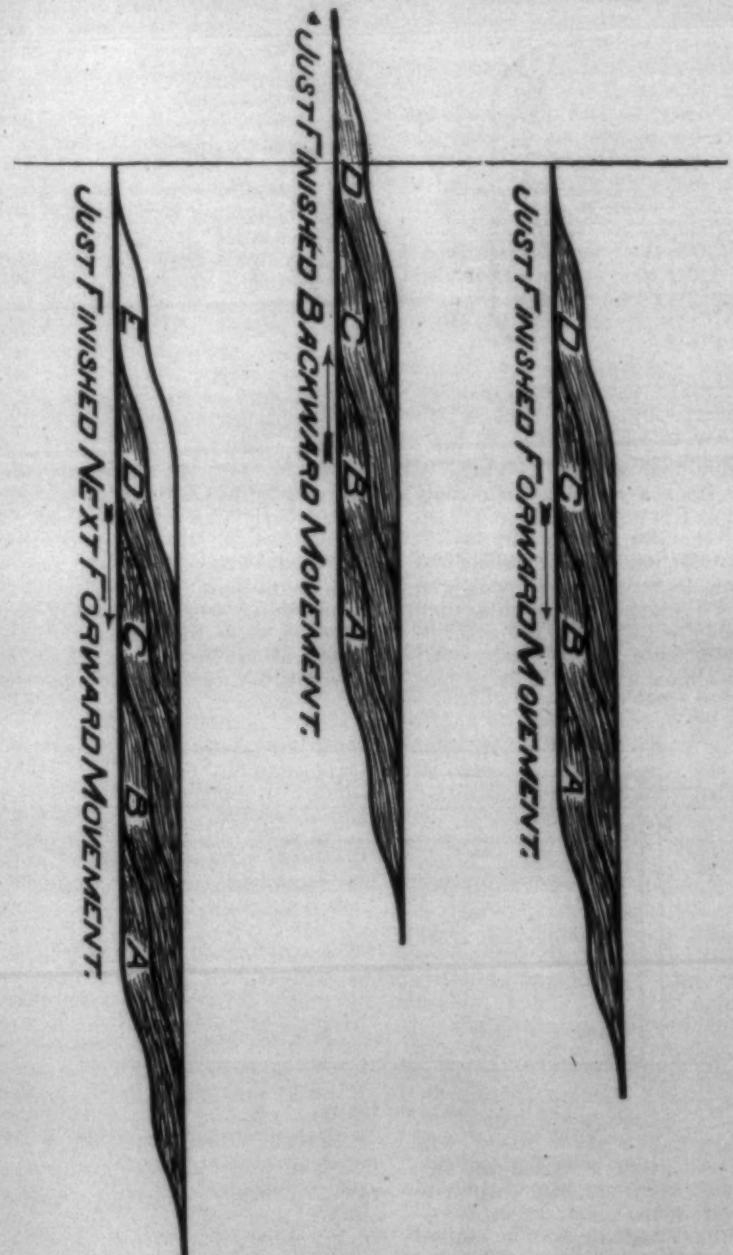


Fig. 14. Piecing Operation of Comber.

next tuft from the combs. The lower part of the figure shows the next step, where the new tuft E has been spliced to D, and the whole has moved forward a distance twice as great as the backward movement. This diagram is not intended to show the exact method of the splice, but will serve to show

*For full discussion of methods and calculations for drawing out, see chapter on Drawing.

The delivered sheet is condensed and drawn through a trumpet and delivered as a sliver, similar to a card sliver. The mechanism for this is not shown in the engravings.

The combed sliver is carried in a trough (somewhat similar to trough system from old fashioned cards to railway heads) along with the slivers from the other heads (six of eight altogether) to a draw-box (not shown) where they are united and drawn* out until the weight of the delivered sliver is about the same as one of the original slivers.

This sliver is condensed and delivered through a trumpet and coiler into a can, in the same manner as with cards.

Brush Q removes from the needles the short fibres which have been combed from the lap.

Doffer R is similar to a card doffer. It removes the fibres from the brush, and concentrates them into a sheet.

Doffer comb combs the sheet off and drops it into a box under the machine, or (in some makes of machine), rolls it up into a lap.

Duplex Comber.

50. The foregoing description applies to combers, whose cylinders have one set of needles and one fluted segment. Combers are also made with two sets of needles and two fluted segments on each cylinder. These are called duplex or double-up machines. They work on the same principle as the simple machines, but produce about 50 per cent. more work.

Settings.

51. It will be noticed that many of the motions on the comber are intermittent, and some of them reversing.

The producing of these various motions by means of cams and gears is very complicated. The cylinder shaft carries a setting plate with figures on a dial, so arranged that the shaft may be turned to a certain figure on the dial to make one adjustment, and to another figure to make another adjustment. These various settings and adjustments are made to suit any desired condition of stock, amount of short fibre to be removed, etc.

52. The fibre which is removed by the combing needles and delivered by the doffer is known as the waste. This stock may be mixed with ordinary short cotton and worked in the usual way for short cotton.

The amount of waste, that a comber should be set to make, varies with the kind of cotton, and also with the character of yarn to be made. If the cotton has been well ginned, and the fibres are strong and quite uniform in length, there is naturally less short fibre to be combed out than in inferior cotton. If the purpose is to make the very smoothest quality of yarn, the comber must be made to do its work thoroughly, and reject all the fibres below the desired length. Judgment must determine for each particular mill where the most economical point of adjustment should be. The amount of waste ranges from 12 to 50 per cent. The general average is about 15 per cent.

In any case, the comber is liable to comb out some of the long fibres with the short. This point must be guarded against by making the proper settings. Nothing but experience can teach how all these settings should be made.

53. The whole draft of a comber is from 20 to 25. If the machine receives six laps, each weighing 300 grains per yard, there would be 1,800 grains fed to the machine. If the waste is 15 per cent., this would leave 1560 grains. If the draft is 20, the sliver delivered would weigh $1,560 \div 20 = 78$ grains per yard.

54. The cans receiving sliver from a comber should not be

(Continued on Page 28)

WHEAT AND COTTON

A billion dollars for an American wheat crop.

A billion and a half for an American cotton crop.

In these approximate figures is mirrored the relative importance of two monarchs of the farm.

Chicago is more than the premier wheat market. It is the very hub of international grain trade. Its vast marketing facilities span the earth.

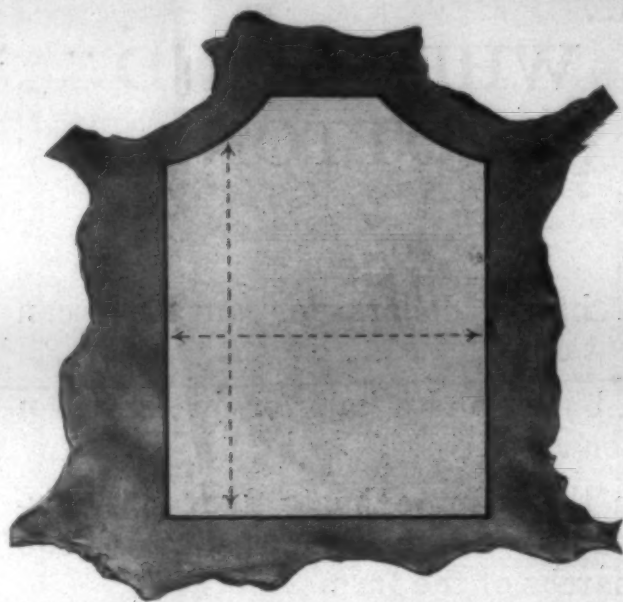
Today these giant facilities are available in the marketing of cotton, America's biggest money crop. Chicago's new cotton market is a part of the Chicago Board of Trade. It benefits by use of machinery built up over a period of a century.

Just as Chicago leads the world in grain, its cotton contract makes delivery at the world's greatest spot basin—Houston and Galveston.

And therein lies a most attractive feature of the Chicago contract. Based on Texas or western cotton, Chicago quotations represent world values.

Literature on both wheat and cotton, setting forth the many advantages of the Chicago market, may be had by writing the Cotton Registrar, Chicago Board of Trade.

CHICAGO BOARD OF TRADE



"ROYAL" and "RELIANCE" Brand Roller Sheep Skins

**Definite Size and Definite Quality—
for a Definite Reason**

"Royal" and "Reliance" Brand Roller Sheep Skins are standard equipment in many of America's largest spinning mills because their operators have found that they can depend upon them to be of one Definite Quality and Accurate in Size.

The skins are carefully finished throughout, the grain side being given particular attention. The flesh side is also specially prepared, so as to prevent slipping on rollers and all skins are well stretched during the process of tanning.

Our customers always receive exactly what they order—no waste, no rejects.

Persian and English Skins in the following sizes:

- No. x Average Size 28"x24"
- No. 1 Average Size 27"x23"
- No. 2 Average Size 26"x22"
- No. 3 Average Size 25"x21"
- No. 4 Average Size 24"x20"
- No. 5 Average Size 23"x19"

We also carry a complete line of English Calf Skins.

A trial order will convince you that our Textile Roller Skins will do what you want—better work, and more of it, for less money.

Manufactured Exclusively By

CHARLES
Bond
COMPANY

Leather Curriers, Importers and Manufacturers of Textile Leathers

617 Arch Street

Philadelphia, Pa.

Northrop Looms and Rayon

THE following information relative to weaving rayon and silk on Northrop looms is contained in the July issue of "Cotton Chat", published by the Draper Corporation.

"King Cotton may still be king. We have not heard of his abdication; we do not expect it. But the king's cabinet and courtiers, our textile manufacturers, see certain signs that urge a diplomatic rearrangement of policies.

Kings have had a hard time since the Kaiser went on a rampage and the rest of the world took part in the ensuing riot. The few thrones that remain hold kings with decrease power and authority.

"King Cotton got caught in the riot, and his outlook for continued kingly sway rests on the fickle fancies of Dame Fashion and wilful woman, who seem bent upon the coronation of Queen Silk.

"In our homes we have toned down the shiny surface of our polished woods of former days to the soft, dull waxed surface and finer taste; but milady's choice in think we have achieved a more re-thine line of bodily adornment is just almost exclusively set on the sheen and soft texture of silk or its imitation, rayon, and mixtures of these with other fibres.

"The practical man has learned not to fly in the face of milady's royal desires, but rather to cater to them and pocket the profits; so the textile manufacturer is here and there modifying his degree of loyalty to King Cotton and mending his financial outlook by giving some adherence to the new queen.

Weaving Rayon.

"A phase of the growing demand for silky effects in fabrics has been the public response to a lot of new fabrics containing artificial silk, now officially known as rayon. Rayon and rayon mixtures with cotton may be woven on cotton looms to which some adjustments have been made. The needed changes have been worked out on the Northrop loom, and manufacturers find they can take advantage of the opportunity this affords them to enlarge or modify their line of products to meet present demands.

"Rayon is manufactured in two forms. When made from wood pulp it is known as viscose. Celanese has a cotton fibre base. The latter will cross-dye. To obtain cross-dyed effects the former must be dyed in the skein.

"Either form of rayon may be purchased from the manufacturer wound on through-tubes of various sizes. For any of these tubes we have special skewers so that the yarn may go directly to the weave room without rewinding. For the smaller tubes we have a specially designed steel skewer. For the large tubes we recommend a wooden skewer of new design which can be run in a shuttle for the regular 8 inch cotton bobbin. We make skewers for shuttles of any standard size.

"If bought in the skein for dyeing or any other reason, the rayon

may be wound on a regular cotton bobbin for weaving.

"In all cases we recommend a bobbin or skewer shorter in relation to the shuttle than in cotton weaving. This is for the purpose of allowing room in the throat of the shuttle for a satisfactory friction lining to regulate the flow of the yarn to the eye. It also reduces the difference in drag on the yarn when weaving from the top to the bottom of the bobbin.

"The best friction lining we have been able to find is made of muskrat skin with the filling drawing against the grain of the fur. Flannel and sheepskin do not give as satisfactory results.

"We furnish a regular rayon shuttle with muskrat friction lining.

Intermittent Feeler Necessary.

"Our new Intermittent Feeler is not only desirable, but absolutely necessary in the weaving of rayon. The repeated blows of any other Feeler will so affect the filling as to mar the beauty of the cloth both in the gray and after piece-dyeing. The damaged filling takes the dye differently.

"For those who want to use rayon stripes in the warp we have developed loom appliances to fit their special needs.

Some Rayon Problems.

"There are still some problems for those who would successfully weave the new fibre. They are peculiar to the fibre, however, rather than to methods and appliances for weaving. There is need of preventing excessive stretch and the absorption of too much moisture. The makers of rayon are busy with these questions and are confident that solutions have been found.

"These are problems of the making of the yarn and its preparation for the loom. In the weave room the Northrop Loom is fully adapted and prepared to handle the new fibre.

Weaving Real Silk.

Many silk mixtures are woven on Northrop looms. Tussah and one and two end Canton silk filling are being successfully used. We have a special skewer for the all-through tubes on which these silks are wound. We recommend a skewer of not over 6 1/4 inches in a shuttle of the size for a 7 1/2 inch cotton bobbin. If the silk is rewound on bobbins, the bobbin should not be over 6 1/2 inches in length.

"The shuttle is fitted with glass or porcelain posts and lined with flannel, fur not being necessary.

"Special shuttle boxes prevent wear of the shuttle.

"The Intermittent Feeler is absolutely necessary.

Rayon The Third Fibre.

"The rayon industry is growing. Statistics recently published show that last year world production of rayon exceeded that of silk for the first time. In pounds used, it now ranks next to cotton and wool in the production of textile fabrics. What its future may be nobody knows, but five large American producers are preparing for increased output."

Duplan Silk Corp. Opens Charlotte Office

The Duplan Silk Corporation, New York City, operating broad silk weaving, rayon preparing and silk throwing mills in Pennsylvania, has announced that it will open an office in Charlotte to handle the affairs of its Commission Department in the South. Having ministered to their silk and rayon needs for the past several years, the corporation is well known among the southern mills. Offices will be in the Johnston Building.

Duplan is one of the foremost broadsilk manufacturers and its early recognition of the possibilities of rayon and the experience gained in ten years of large scale use and eager study of rayon, are responsible for the success and growth of the corporation's Commission Department. About ten years ago, when Duplan was having its first successes with "Baronette Satin" which later became really famous, it received, unsolicited, requests to make rayon warps and wind rayon filling for those cotton mills who also glimpsed something of the big part rayon was to play. Since then the Duplan Commission Department has been the medium through which not a few mills have taken up rayon. The activities of Duplan has been welcomed and encouraged by the producers of rayon, as well as by the ultimate weavers and knitters of it.

Among the concrete items for which the Duplan Corporation is known in the weaving trade is "Duplanized" rayon. "Duplanizing" is an individual thread sizing developed by the corporation. The success of "Duplanized" rayon first brought attention to the possibility of using ordinary rayon for warp without additional twist, thereby, eliminating considerable extra cost.

Two years ago Duplan originated the practice of shipping rayon warps on paper shells. The method has since become practically standard. Mill men pronounce it a tremendous factor in improving deliveries of warps, besides considerable saving in equipment and transportation expense. More recently has come the one-shipment spool on which "Duplanized" rayon is shipped to mills who make their own warps from the sized yarn.

Having been closely identified with the development of rayon as a textile material in the South, the Duplan Corporation, in establishing a Southern office, affirms its faith in the future of the Southern mills as consumers of silk and rayon yarns—as producers of fancy goods—and places itself in better position to promptly serve.

The Charlotte office will be in charge of H. H. Cannon, Mr. Cannon is not a new-comer to the South, having ably represented A. P. Villa & Co. for several years in similar capacity. He will be supported in his work by the practical and research staffs of the corporation.

In addition to representing the Commission Department of the corporation in matters pertaining to rayon manipulation carried on at Hazleton, Pa., he will look after the Southern affairs of the corporation's

branch throwing mills—The Dorrancon Silk Works, Kingston, Pa., and The Guaranty Silk Corporation, Nanticoke, Pa. These latter concerns are widely known as commission throwsters of Canton and Tussock Tram, crepe twists, hosiery tram and combination yarns. The Hazleton and Dorrancon plants also furnish warping of Japan and Italian silks. The Charlotte office, therefore, will be well equipped to handle inquiries on any description of manipulation silk or rayon used by weaving or knitting mills.

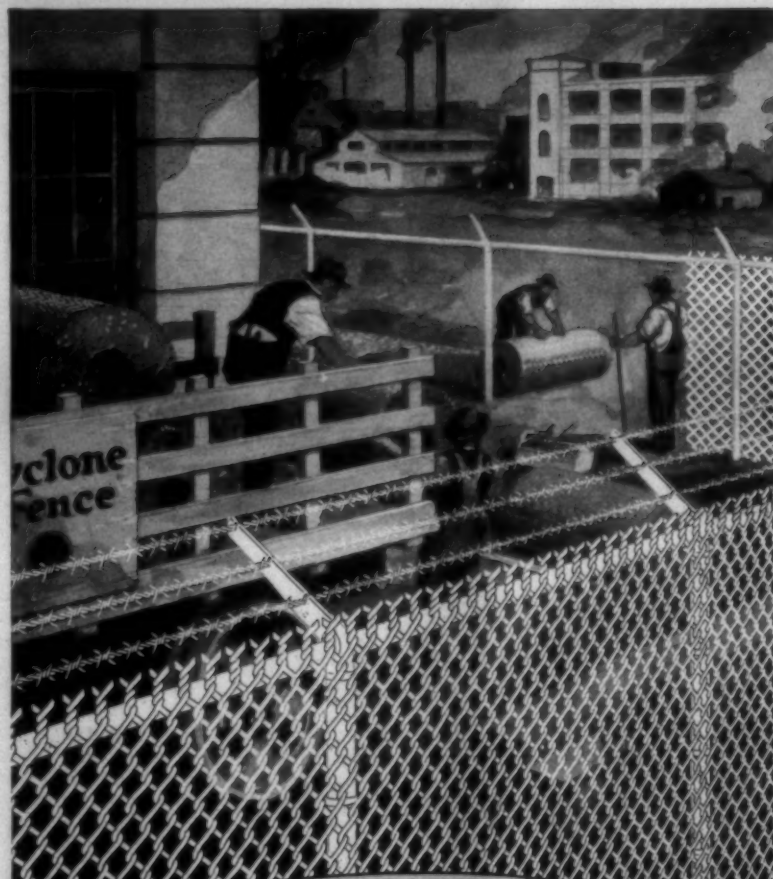
American Grey Cloth Prices Below British

THE general trend of cotton grey cloth prices in both New York and Manchester during the current year has been downward, although there have been minor recessions and recoveries, according to the compilation of international cotton grey cloth prices maintained by the Textile Division of the Department of Commerce. At the beginning of the year, the average price per pound of eight representative grey cloths in the New York market was a quarter of a cent below that of comparable grey cloths in Manchester. This advantage, however, was lost almost immediately, and during the first quarter of 1925, New York prices averaged fully a half cent above Manchester. During April, the marginal difference was about a quarter of a cent in favor of domestic cloths; and in May almost one-half cent, while in June this spread between American and British cloths amounted to approximately two cents in favor of the former.

The average price of these New York cloths for the first six months of 1925 was \$0.4802 while that for Manchester cloths was \$0.4814 compared with \$0.5059 for New York and \$0.4622 for Manchester during the first half of 1924, and \$0.5393 and \$0.4512, respectively, for the corresponding period of 1923. Comparative figures for the first six months of 1922 are \$0.4170 and \$0.4068. The current year is the first time since the Textile Division began this compilation that American prices have fallen below British quotations for a six-month period.

The reduction shown in the New York averages for 1925 as compared with 1924 was apparent to a greater degree in sheetings than in print cloths, a slight advance having occurred in one of the latter cloths used in these comparisons.

Although prices of British grey cloths quoted in shillings and pence in 1925 were lower than during the first half of 1924, the advance in sterling exchange has increased the cost of British goods in world markets. The current exchange value of the pound sterling averaged \$4.86 in June, 1925, against \$4.32 in the corresponding month of 1924. The average price of the six shirtings and two printers for which Manchester prices are quoted, was \$0.4659 in June, 1925, and \$0.5175 in the like month of 1924, when converted at the par value of the pound sterling.



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Practical Discussions

By
Practical Men

Belt Life.

Editor:

How long does an ordinary belt last on a spinning frame?

Spinner.

Answer to Sport Goods.

Editor:

Yes, it is entirely feasible to spin coarse yarns up to No. 5 (5) yarn on jacks. But for yarn numbers coarser than 3½ it is best to spin them on roving frames 8x4 or 7x3½.

The advantage of making such coarse yarns on roving frames is that they can be put right into the warpers or can be quilled direct without being spooled.

S. C.

Answer to Supt.

Editor:

The labor turnover in any mill where it exceeds the bounds of prudence is a serious proposition. The cost varies, as estimated by labor managers or employment agents ranges from \$50 up to over \$300 per new hand per year, depending upon local conditions. For example, it costs much more to retrain new hands in a fancy goods mill than it does in a plain goods mill.

R. T.

Answer to Towel Weaver.

Editor:

Yes; fringed towels can be woven on a four-box loom with two colors or three colors in this manner without having a fringe let-off and take-up motion. Use one box for the ground work of the towel. One or two boxes for the fancy or colored border. Use the third box with an empty shuttle to omit weaving the length of the fringes. That is, if there are 32 picks to the inch and the fringed space measures 3 inches or 96 picks, the loom will run on the box with the empty shuttle for a total of 96 picks. With the fourth box a third color can be used either in the border or in the body of the towel.

Smart Alex.

Answer to A. R. A.

Editor:

For many years it has been supposed that pick and pick goods could not be woven on a one by two or four box loom. But the expert weaver has found that pick and pick goods can be woven on such a loom without any trouble whatever. While it is true that the shuttle of any one color must be returned on the next pick from the

single box side to make room for the next shuttle, the returning shuttle does not necessarily have to go through the next shedding of the warp. This is because all of the harnesses may be either lifted or depressed at one time, thus allowing the returning shuttle from the one-box side to lay the pick either under or over all of the ends and not be woven in. This has been done as a regular job and thus proves that it can be done all right.

Designer.

From Felters to Nappers.

We have several felting machines which we do not need to use any more. But we need nappers very much. Is there any way by which felting machines can be changed to nappers? If so, we would like to hear from them through your interesting question and answer department.

Southerner.

Answer to Joke.

Editor:

As Smart Alec and H. H. H. have not answered Jake, will you please publish my answer. There was 10 526-1000 pounds of yarn and 526-1000 pounds of waste, or a little over one-half pound of waste. You see if the man could get 10 pounds of cloth and 5 per cent of waste, the 10 pounds of cloth represented only 95 per cent of the whole. The problem can be worked out by proportion thus:

95:100::10:10 526-100.

Funny.

Threads Lap Around Rolls.

Editor:

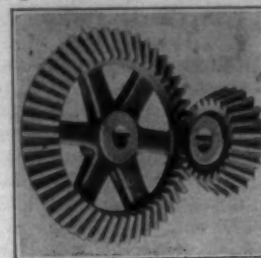
May I ask through your Discussion Page what causes thread to lap around the front steel roll on spinning frame, and what is the best remedy for stopping it? I am speaking of new steel rolls that have been thoroughly cleaned and put in old frames. Why does the thread lap around the new rolls when it did not do this with the old rolls? We cut off from ten to twenty thread-laps each day on twelve frames. Would like to hear from some one who has had trouble of this kind.

A. B. P.

Bunch Builders.

Editor:

Some few years ago the writer experimented to a small extent with bunch builders but did not find same very practical at that time. However, there may have been a considerable advance in the perfection



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of this device since that time and the writer would like to have some one of your readers who have experience in operating bunch builders answer the following questions for his benefit.

1. Approximately what percentage of weave mills operate bunch builders?

2. How long would the spinning frames have to be stopped to install bunch builders?

3. With the installation of bunch builders how much bunch would be required on the bobbins in running 20s to 30s?

4. Will the installation of bunch builders require extra help in the weave room?

5. Can they be operated automatically successfully?

6. What percentage of thread waste will they save?

7. Are bunch builders practical?

I realize that the above is quite a list of questions but such information as may be given will be greatly appreciated.

G. W. T.

Life of Spinning Rolls.

Editor:

Will some of your readers through the Practical Discussion Page tell me how many spinning rolls I should use per day? I have 120 frames on 18s to 24s hosiery yarns, using $\frac{3}{4}$ to $\frac{1}{2}$ -inch staple. I have not exceeded $1\frac{1}{2}$ rolls per frame and my company thinks this is high. Is it, or not, and if so, why.

Will some one also tell me whether silk and cotton can be spun on ring frames and how?

Spinn.

Answer to J. O.

Editor:

Yes; yarns can be spun on speeders and they are suitable for tire fabrics. The twist gear is changed to a small enough one to put in the extra turns of twist per inch.

No other changes are necessary to make to a speeder, other than possibly putting on more weight on the cone, and adding another belt on top of the cone belt in use, or else widening the cone belt.

H. D. M.

Answer to N. E.

Editor:

I am not surprised to see the question N. E. has brought up before the attention of the Practical Discussion columns of this paper. A great many mills are making chafed yarns and do not realize it or else do not mind it. This is because that in many cases chafed yarns are beneficial.

In the manufacture of print cloths, for example, where the goods are to be printed it is a good thing to have the cloth well filled. There should be no interstices or spaces between the threads. The hairy or chafed yarns fill in these spaces, thus the printed figures imprint better and stand out in full figure without a break in the outlines, and in the colored spots. The same can be said about goods which are to be napped. The more hairy

the more chafed and the more fuzzy the better it will be napped. Now not so with many other lines of work. In the manufacture of shirtings and of dress goods, for example, when these goods are woven in madras styles, etc., the lines and figures must be clean cut, but chafed yarns will not do this and will spoil the figures. Other examples can be given, but I must now give you the remedy for preventing chafed yarns. First, I will show you how chafed yarns are made, and how to prevent same:

1. Stock not cleaned enough in the picker room.

2. Stock rushed through the cards too fast.

3. Insufficient twist in the rovings.

4. Speeds too high on roving frames.

5. Speeds too high on spinning frames and twisters.

6. Travelers too light.

7. Using the wrong kind of separators on the spinning and twisting frames.

8. Draught too long on roving frames.

9. Draught too long on spinning frames.

10. Worn out travelers.

11. Worn out rings.

12. Bad top rolls.

13. Bad steel rolls.

14. Poor humidity.

15. Raw cotton not oil sprayed.

16. Spinning frames with gauge too narrow.

17. Cotton too short for the goods.

From the above list it can be readily seen and also understood why chafed yarns are made.

As you are very anxious to eliminate chafed yarns, it is also necessary now to go somewhat more into detail and show you how to remedy the situation, providing your mill is afflicted with any one or more of the defects mentioned.

Taking up the first two items. If the cotton is not well cleaned in the pickers and in the cards, the yarns will be made up of shorter fibres and which will also be filled with dirt. This condition of things will in turn make a yarn which will have every appearance of being chafed because it will be so hairy or fuzzy and also because it will have so much dirt sticking out all around that even the long fibres cannot be twisted and laid down against the core lengthwise, and this gives the yarn a chafy appearance.

Insufficient twisting and too high speed will cause the fibres to fly off at a tangent.

If the travelers are too light the yarns will whip against the sides of the separator blades and actually chafe the yarns.

Separators that are of the grid kind or having openings in the blades will especially cause chafed yarns if the travelers are too light, and the speeds too high. And sometimes grid separators will cause chafed yarns if the travelers are too light, and the speeds too high. And sometimes grid separators will cause chafed yarns anyway. The only safe separator is a new kind which have solid blades. These are

(Continued on Page 27)

Our Service Department

Yes, we know no loom-harness manufacturer has ever done it before, but why shouldn't your weaving difficulties with regard to loom-harness and reeds be of just as much concern to us as your machinery troubles are to the manufacturers of your textile machinery?

And so with this in mind, we have established a Service Department in connection with our Southern Plant. No problem in your weave room is too small or too large to keep us from giving you the best we can offer. No one knows it all, but what we can give is yours for the asking.

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D. H. HILL, JR.
JUNIUS M. SMITH

Managing Editor
Associate Editor
Business Manager

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Let's Boost Awhile

ON this page there is a cartoon reprinted from a circular of one of the largest New York banks.

It is entitled "The Whispering Game" and shows No. 1 saying "Business is a bit slow," and when the whisper reaches the last man it has been magnified until it is "Business is terrible. We'll all be ruined."

It is time for cotton manufacturers to stop and take stock as to whether or not they are running the cotton manufacturing game with the "whispering game."

Almost every cotton manufacturer in the country, North and South, is continually wailing and crying and tells everybody he meets that the cotton manufacturing business is in awful shape.

They talk about short skirts ruining business whereas short skirts have been with us for seven years.

They talk about silk and rayon having displaced cotton whereas it is a fact that women always did wear a great deal of silk and the consumption of rayon upon a large scale has been in effect for at least six years and during that time the consumption of cotton goods and yarns by the automobile trade has increased far more than the extent to which silk and rayon have reduced the consumption of cotton goods.

The consumption of cotton goods from August 1, 1924, to August 1, 1925, was considerably in excess of the output of the cotton mills.

That is a remarkable statement in the face of present conditions and yet it can be shown to be true by the simple fact that stocks of cotton goods held by mills are considerably less than they were one year ago.

Stocks can only be reduced by consumption exceeding production.

The business and the buying power of every country in the world is improving and there is every reason to expect a larger consump-

tion of cotton goods the coming year than during the past twelve months.

With reduced stocks of goods and statistics upon which to regulate production it is almost a certainty that during the coming twelve months consumption will again be in excess of production and with a less accumulation of goods at the start, it should be possible to change from a buyers' to a sellers' market.

For four years merchants have been fed with so much pessimistic talk, largely originated among cotton manufacturers, that they have felt no urge or necessity to fill their shelves with cotton goods.

Any general movement of merchants to fill their shelves would, under the present condition of low mill-held stocks, advance prices and produce a period of prosperity.

Such a movement can only be based upon a confidence in the stability of cotton goods values and can not come as long as cotton manufacturers spend most of their time spreading pessimism by telling everybody they meet that the cotton manufacturing business is in a deplorable state.

The wise man who said long ago "It is an evil bird that fouls his own nest" must have caught a vision of the cotton manufacturers of today.

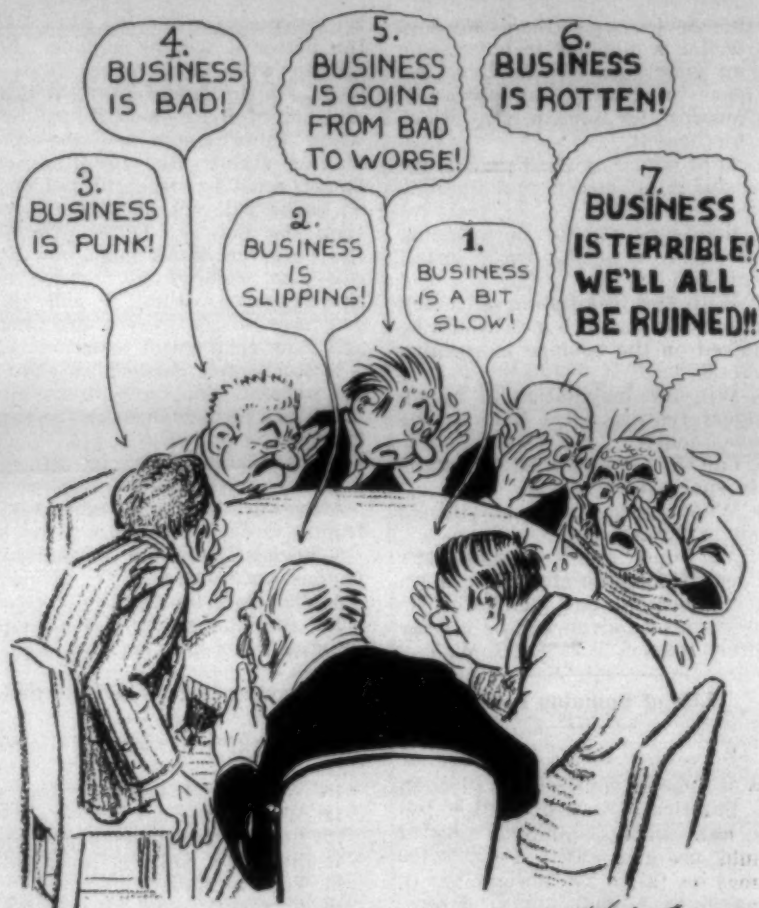
Why not resolve to utter no pessimistic statement for three months?

Why not try three months of boosting?

Talk about the world-wide improvement in buying power, the remarkable consumption of American cotton as shown by Secretary Hester, the great reduction of stock of cotton goods in the hands of mills.

If we could start the cotton manufacturing industry upon a period of boosting we believe that we would at the same time start a period of prosperity.

Look again at the cartoon, "The Whispering Game," and resolve to reverse the process.



THE WHISPERING GAME - SH-H-H!
(Start with No. 1)

Let Wages Alone

DURING the past week there has been a general wage reduction movement in the textile mills of New England but we sincerely hope that there will be no such movement in the South.

We have always taken the position that wage reductions, except to equalize abnormal advances made in boom periods, shall never be made except when there has been a reduction in the cost of living.

We also regard it as particularly unfair to make reductions in periods of curtailment or closely following upon such periods.

The splendid relationship that exists between the mill operatives and the management of the cotton mills of the South is based upon the fact that the management has as a rule tried to be fair and has had an interest in the welfare of the employees.

Reductions of wages at this time would press hard upon those who find it difficult to now meet the cost of living and we do not feel that reductions should be made.

Furthermore, we believe that news of reductions in wages would be seized upon by buyers of cotton goods to reduce their offers and when the movement was over, the mills would have only taken money from their employees and given it to the buyers of goods with no net benefit to the mills.

We have heard of no contemplated reductions in the South but think this is an opportune time to state our position.

Chicago Belting Company Awards Prize

THE Chicago Belting Company announces in a page advertisement that the \$500 prize offered for the best name for their new spinning frame belt has been awarded to B. R. Cole, of the Micolas Cotton Mills, at Opp, Ala., who suggested the name "Yarnmaker."

Mr. Cole is a son of C. H. Cole, superintendent of the Opp Cotton Mills and the Micolas Cotton Mills.

The judges, one of whom was our editor, were asked to make their decision from a long list of names without knowing the name of the authors. Each judge selected five names and designated the order of his preference.

"Yarnmaker" was one of Mr. Clark's selections, but was not his first choice.

There can be no harm in saying that Mr. Clark's first choice was "Spintex," but a tabulation of the votes of the three judges showed that "Yarnmaker" had the most points and we have to admit that it is a good name for a spinning frame belt.

We congratulate Mr. Cole upon winning and the Chicago Belting Company upon having secured a good name for their special spinning frame belt.

The contest attracted a great deal of attention and the large number of mill men who took part in it will be interested in the announcement of the prize winner.

Personal News

G. W. Ramsay has been promoted to overseer of carding at the Ragan Spinning Company, Gastonia, N. C.

W. T. Stowe has been promoted to overseer spinning at the Ragan Spinning Company, Gastonia, N. C.

L. F. Perkins has resigned as night superintendent of the American Mills, Bessemer City, N. C.

L. E. Sherrill has resigned as overseer of weaving at the Spencer Mountain Mills, Gastonia, N. C.

J. S. Thomas has become night superintendent of the American Mills, Bessemer City, N. C.

M. C. Dawkins, of Rock Hill, S. C., is now overseer of carding at the Osage Mills, Bessemer City, N. C.

L. J. Cloniger has become overseer of weaving at the Spencer Mountain Mills, Gastonia, N. C.

M. T. Grimes has resigned as superintendent of the Gluck Mill, Anderson, S. C., effective September 1.

J. A. Shipes, of Gastonia, N. C., is now overseer spinning at the Monarch Mills, Dallas, N. C.

W. H. Garrison has resigned as overseer of night spinning at the Monarch Mills, Dallas, N. C.

W. O. Ruffin, of Red Springs, N. C., is now fixing looms at the Borden Mills, Kingsport, Tenn.

W. J. Brafford, from High Shoals, N. C., is now card grinder at the Borden Mills Kingsport, Tenn.

W. J. Hamilton is now grinding cards at the Borden Mills, Kingsport, Tenn.

J. A. Summey has been transferred from day to night overseer spinning at the Monarch Mills, Dallas, N. C.

John L. Robinson, of Rockingham, N. C., has accepted the position of superintendent of the Aurora Mills, Burlington, N. C.

R. L. George has become assistant overseer carding and spinning at the Phenix Mill, Kings Mountain, N. C.

E. M. Deese has resigned as overseer of No. 2 carding at the Baldwin Mills, Chester, S. C., to accept a position at the Phenix Mills, Kings Mountain, N. C.

J. W. Kidd has resigned as superintendent of the Phenix Mill, Kings Mountain, N. C.

C. B. Hayes has resigned as overseer carding at the Phenix Mills, Kings Mountain, N. C.

V. T. Ham has resigned as overseer spinning at the Phenix Mills, Kings Mountain, N. C.

Marvin Haston has accepted the position of superintendent of the Phenix Mill, Kings Mountain, N. C.

A. F. Briggs has resigned as superintendent of the Osage Mill, Bessemer City, N. C.

Charles Jones has been promoted from second hand to overseer of No. 2 carding at the Cabarrus Cotton Mills, Kannapolis, N. C.

P. B. Mitchell has been promoted from night superintendent to superintendent of the Osage Mill, Bessemer City, N. C.

J. L. Rhinehardt has resigned as overseer carding and spinning at the Magrace Mills, Kings Mountain, N. C., to become general overseer of carding and spinning at the Phenix Mills, Kings Mountain, N. C.

W. F. Honeycutt has resigned as overseer of carding and spinning at the Ragan Spinning Company, Gastonia, N. C., and accepted a position at the Globe Mills, Mount Holly, N. C.

W. L. Blackwelder, of the Cabarrus Mills, Concord, N. C., attended summer school at the N. C. State College, Raleigh, N. C., where he completed the course in cotton grading, carding and spinning.

W. S. Sisk has resigned his position at the Roanoke Mills, Roanoke Rapids, N. C., to become overseer night carding and spinning at the Fountain Cotton Mills, Tarboro, N. C.

J. M. Kelley has resigned as overseer of carding at the Hampton Mills Hampton, Ga., to become over-spinning at the Loray plant of the Manville-Jenckes company, Gastonia, N. C.

J. R. Bragg, who has been with the Pelham Division, Consolidated Textile Corporation, Pelham, Ga., has resigned and is now salesman with the Hand Trading Company, of the same place.

3 REASONS

why

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MILL NEWS ITEMS OF INTEREST

High Point, N. C.—The Highland Cotton Mills will erect a one-story brick addition.

Calhoun, Ga.—The Echota Cotton Mills will erect an addition 100x100 feet to be used as a slasher room.

Winchester, Va.—The Winchester Woolen Mill has been acquired by George Dunham who will organize a company to operate the plant.

Knoxville, Tenn.—The Knoxville Knitting Mills have let contract to A. H. Whiteman for the erection of a plant addition to cost \$10,000.

Huntville, Ala.—The Erwin Manufacturing Company, capital stock \$50,000 has been incorporated by J. F. Chambers, president, and others to establish a plant to manufacture knit goods.

Macon, Ga.—Stockholders of the Bibb Manufacturing Company, have voted to issue \$500,000 in preferred stock, the action being ratification of recommendations adopted by the board of directors some time ago.

Oklahoma, City, Okla.—The Chamber of Commerce is negotiating with the C. R. Miller Manufacturing Company, of McKinney, Texas, for the establishment of a large cotton mill here.

Andalusia, Ala.—The Brown Manufacturing Company, has been organized here with a capital of \$50,000 by L. E. Brown, president and G. W. Etheridge, secretary and will establish a plant to manufacture athletic underwear. They have not yet purchased equipment and are interested in 50 to 75 machines.

Ozark, Ala.—The Ozark Cotton Mills have been sold under mortgage to C. A. O'Neil and Sons, of Andalusia, Ala., who have reorganized the company under the name of the Dale Cotton Mills. The plant will be enlarged and improved and placed in operation at an early date.

Cherryville, N. C.—The Cherryville Manufacturing company held its stockholders meeting last Wednesday afternoon. This mill had a very good year and made some money and the business was satisfactory to stringency of the times. It was the opinion of the directors that it would be for the best interest of all concerned to pay no dividends at this time.

Following were elected to serve as directors for the ensuing year: D. E. Rhyne, P. C. Rhyne, W. B. Rhyne, J. D. Rudisill, J. M. C. Stroup and Hoyle Alexander. Following the meeting of the stockholders, the directors met and elected the following officers: D. E. Rhyne, president; P. C. Rhyne, vice-president, and W. B. Rhyne, secretary and treasurer.

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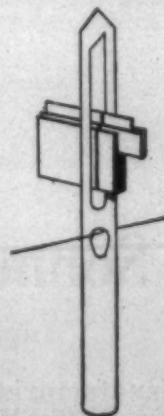


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Bessemer City, N. C.—Subject to confirmation on August 10th. Frank Goldberg and associates, owners of the American Cotton Mills of this place have purchased the McLean Mills, which have 6,000 spindles and 156 looms.

Bessemer City, N. C.—M. Gambrill, of Harve de Grace, Md., president of the Gambrill Mills is temporarily in Bessemer City, looking after the affairs of the mill, his presence having been made necessary by the recent death of his brother, E. E. Gambrill.

Cherryville, N. C.—A addition to contain 5,000 spindles will be erected by the Rhyne-Houser Manufacturing Company, decision to enlarge the plant having been made at the meeting of the stockholders here last week.

A dividend of five per cent was declared at the meeting and all officers and directors were re-elected. D. E. Rhyne is president.

Fort Worth, Texas.—Suit has been entered in the county court here against the Fort Worth Mills by Dan Moody, attorney-general, who charges that charter was obtained under false pretense as to the amount of paid in capital stock at the time the charter was applied for. A temporary injunction forbidding the sale of 180 acres of land by the mill corporation has been secured.

Kings Creek, S. C.—Subscribers to the capital stock of a yarn mill to be organized at Kings Creek have been called to meet at Kings Creek August 12, at 4 p. m., for the purpose of organizing and electing officers. The company, which will manufacture combed yarns, will be capitalized at \$100,000. A. W. Love, prominent Kings Creek business man, is one of the promoters of the organizations.

Cherryville, N. C.—The Howell Manufacturing company held its annual meeting here. The business had been farly good for the year and the mill has made money, but it was not considered wise to pay a dividend at this time. However, the stockholders were satisfied with the progress made during the year.

Election of directors resulted as follows: D. E. Rhyne, P. C. Rhyne, W. B. Rhyne, C. A. Stroup, J. C. Ballard and J. S. Stroup. And the old officers were re-elected as follows: D. E. Rhyne, president; P. C. Rhyne, vice-president, and W. B. Rhyne, secretary and treasurer.

Wake Forest, N. C.—Request for a cut in the assessed valuation of the machinery of the Royal Cotton Mills of Wake Forest of over \$100,000 was made to the Wake County Board of Commissioners, in a petition presented by J. S. Griffin and

Charles U. Harris, attorneys. The matter was referred to County Auditor H. G. Holding with power to act.

The present assessed valuation of the machinery of the mills is approximately \$367,000. The petition asks that this be cut to \$256,111. The petition declares that the machinery could be replaced in the mill now for \$394,017 and that under the Machinery Act of the 1925 session of the General Assembly the mill is entitled to 35 per cent depreciation for the years during which it has been in use.

The over assessment was made in 1919, it is alleged. In only one year, 1923, during the last five has the mill made an operating profit, the petition states.

Tuxedo, N. C.—At the annual meeting of the stock holders of the Green River Manufacturing Company, the President's report stated that the mill had been operated on a very high quality of fine combed yarns, full time, since it was started up under the management of Frank W. Van Ness & Associates of New York in July 1924, with the exception of Sundays and holidays and that the total capacity of the mill has been sold in advance during this entire period at fair prices and that the future outlook for profitable business is good.

The treasurer's report stated that the earnings of the business for the year ending July 30th, 1925 amounted to a little over 25 per cent on the total outstanding capital stock and after providing liberal reserves for depreciation. This report also stated that the total reductions in the company's liabilities for the same period amounted to \$96,562.

Johnson City, Tenn.—Headed by a group of international bankers, New York financiers and German industrial leaders, the American Bemberg company, capitalized under the laws of Maryland at \$17,500,000, immediately will begin work on a large rayon plant here, J. W. Ring, president of the local Chamber of Commerce, announced today.

Ultimate employment of 10,000 operatives and an investment of approximately \$10,000,000 in construction are outlined in a five-year development program for the plant, Mr. Ring said.

The American company is closely affiliated with the I. P. Bemberg company and several other concerns in Germany. Officers of the corporation are: William Langenburch and Carl Benrath, of the I. P. Bemberg company; Rudolph Rosenheim and Kurt Meyer, of the Berlin banking house of C. Schleisinger-Trier company; Fritz Bluetgen and Willy Springgorn, of the Vereinigte-Fabriken company, Elberfeld, Germany, and Alferd Schoenlicht, of the Bebroeders-Teixeira-Demattos company, Amsterdam, Holland.

Among the New York financiers mentioned by Mr. Ring as interested in the company are Jacob Straus, Herbert Lehman, Jacques Hartogs, Myron Falk and Dr. Arthur Mothwrf.

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Texas Seeks Mills of New England

Dallas, Tex.—"Many of the textile mill owners of New England are ready to move their mills to Texas if the Texas citizens will subscribe to one-half of the investment, based upon the appraised value of the machinery and the cost of the new buildings," Oscar C. B. Nau, manager of the Corsicana Chamber of Commerce, said while in Dallas. Mr. Nau has completed an investigation of two weeks in the textile centers of New England, at the direction of the textile committee of the Corsicana chamber. He was en route home to make his report and recommendations on steps to be taken to secure a textile mill for that city. This is one of the major objectives of the Corsicana chamber.

"The investigation of the New England mills was made on the theory that it would be more practical to have one of the mills moved to Corsicana and operated under its old management and sales organization than to incur the hazards of erecting an entirely new plant," said Mr. Nau.

"Thirty-three mill owners or managers in Boston I found favorable to such a proposition, and four of them are ready to take immediate action.

"Under the plan proposed by the owners, the machinery would be appraised by an engineer acceptable to both the people of Corsicana and the owners. Corsicana would then subscribe a sum equal to this for the erection of a building and other expenses and the plant would be transferred bodily to Texas.

"Cost of manufacturing cotton goods in New England is about 20 per cent higher than in Texas. This is due partly to the initial cost of transportation of about \$7.50 a bale to the mill. Due to climatic conditions and other factors affecting labor, this item is also much higher in Boston, as compared to the average scale being paid in the Texas plants.

"There would be not a cent spent in promotion fees under the plan favored by the Boston mill owners in reorganizing their companies incident to moving to this State."

Silk Prices Advance in France.

Silk prices advanced rapidly on the French market during the last week in June, following the course of the pound sterling, the Department of Commerce is advised by Consul Hugh Watson. They did not, however, reach the level of quotations in countries of origin either in the Orient or in Italy. The causes of the advance, lie in the mediocrity of the Italian crop and the troubles in China as well as in the continued difficulties confronting French finance. Manufacturers, also, bought a new current of foreign orders. Large shipments were made to England in the hope of entering the goods before the tariff on silk goods went into effect. From Paris came an unusually satisfactory demand for silks to meet the needs of the tourist season.

Research Work in Finishing

(Continued from Page 14)

such on the fibre in an insoluble form. With direct cotton colors, nearly all of which formed colloidal solutions, the dyeing took place in such a manner that these became dispersed into microns or sub-microns, and when the optimum degree of dispersion had occurred these could enter the micellar structure of the fibre, when they became precipitated again through gel formation.

The most remarkable effects shown in the micro-photographs were those obtained by boiling or steaming, under four atmospheres' pressure, cotton dyed with indigo, naphthylamine claret, chrome yellow, and indanthrene red 5GK. It was shown that by boiling or steaming under pressure the colors first became more and more agglomerated on the fibre and were ultimately driven into the interior of the fibre, and then assumed a distinctly crystalline appearance. This phenomenon was shown even to occur when cotton dyed with diamine blue R.W. was boiled with water. The cause of certain colors changing shade in drying at an elevated temperature was assumed by the author to be due not to the dehydration of the color, but to that of the fibre.

The nature of the vat-dyeing process was discussed in a further paper by Professor K. Brass, who gave an account of the results which he had obtained in dyeing cotton under special conditions with a number of vat-dyes, including indanthrene yellow, pyranthrone violet, and hydron blue. This author took the view that all vat-dyes when reduced yielded bodies which, combined with alkalis to produce soluble salts, may be regarded as what he terms "vat-acids," and that in this condition they enter into chemical combination with the cotton fibre to produce what he terms a "leuco-dyeing." If this operation be carried out in an air-free atmosphere, and an acid in the form of carbon dioxide, or of a dilute mineral acid, is introduced, the vat-acid is thrown down on and in the fibre, in an insoluble form. By subsequent exposure to the air the vat-acid takes up oxygen, and the fibre is dyed the characteristic shade of the particular vat-dye employed. There is, however, this remarkable difference between this system of dyeing and that ordinarily employed, in so far that in the process described a much heavier shade results than when the dyeing is done in the ordinary way. The author considers that the carbonic acid of the atmosphere plays an

important part in the fixation of vat-dyes during air exposure, a point which has hitherto been overlooked.

Dyeing Acetyl Silk.

An interesting account was given by a young French chemist (whose name did not appear in the list) of the "dyeing" of acetyl silk a-amino anthraquinone. He pointed out that if this substance was precipitated on the fibre, the minute crystals, which were plainly visible under the microscope, were seen to dissolve gradually in the substance of the fibre. This phenomenon was explained on the basis of the observation that acetyl silk was not a crystallite like cotton but a true colloid.

Professor P. Karrer, whose work on the sugar, starches, and on cellulose is well known, after discussing the micellar theory of Naegeli and its development by Ambron, Scherrer, Herzog, and others, who had applied polarized light and X-rays in endeavoring to ascertain the physical structure of cellulose, said that the latter had now been definitely shown to agree with that of a crystalloid (crystallite). It had been shown that in the fibres the micellae ran parallel to the fibres themselves. In regenerated cellulose (for instance, from cuprammonium solution) the micellae still existed,

but their parallel position had become distorted to a certain extent. They consequently presented a larger surface, and the increased capacity of absorbing water and dyestuff was attributed to this circumstance. In this condition cellulose was also more reactive, especially towards certain ferments found in the digestive organs of the snail. In respect to the structure of the cellulose molecule it was shown that cellulose gave a quantitative yield of glucose when hydrolyzed by acids. Under certain conditions, however, a biose, in the form of Skraup's cellobiose, was obtained. Ost had obtained this substance in a 40 per cent yield, though the actual yield would probably have been somewhat higher if all could have been isolated. According to the most recent researches of Scherrer and Ott the composition of cellulose was shown by the X-ray diagram to correspond to the formula $(C_6H_{10}O_5)_3$. — Manchester Guardian.

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Bobbins, Cap Spinning Bobbins,
Skewers, Warp Bobbins, Filling
Bobbins for Northrop Looms,
Twister Bobbins, Twister Spools,
Warper Spools, Comber Rolls,
Quills, Underclearer Rolls (plain
or covered).

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AUTOMATIC SHUTTLES
Try Our New Automatic Shut-
tles for either cotton or woolen
weaving. It is meeting every
requirement with entire satis-
faction.

Practical Discussions

(Continued from Page 24)

especially desirable when high speed, soft twist or light travelers are used, also with spinning frames of a narrow gauge.

Also, to prevent chafed yarns, it is well to use good staple cotton, keep the travelers new, and to have the relative humidity as nearly right as possible.

Trusting this will answer your question.

H. D. M.

Dust Explosions.

Editor:

Answer to Assistant Supt.: Some weeks ago I saw in your quizz column a question regarding dust explosions which was not answered. I am interested enough to answer this question by stating that dust in thick vast amount in any room is dangerous. Even a rake which was used in a boiler room, the handle of which was made of a piece of piping, exploded because it became filled with coal dust.

Smart Alec.

Colored Goods Association Disbands.

The Association of Colored Cotton Goods Manufacturers has been formally disbanded, notice to that effect having been sent the members by J. Leake Spencer, president. The organization retires in favor of the Gingham Association of New York, which has just been revived, and Mr. Spencer has urged all members of the association to lend their support to the New York body.

Represents Atkinson, Haserick & Co.

Ralph Van Landingham, Jr., of Charlotte, has been appointed Southern sales agent for Atkinson, Haserick & Co., of Boston, Mass., and Bradford, Eng. The company is well known as makers of Tunstall combers and other lines of mill machinery and supplies.

Assistant Freight Traffic Manager.

J. M. Woodruff has been transferred by the Southern Railway from Washington to Charlotte and will become assistant freight traffic manager. Mr. Woodruff has been in Washington for 14 years but was originally from Georgia and is a brother of W. A. Woodruff, superintendent of the Bibb Manufacturing Company plant at Columbus, Ga.

Hester's Annual Report.

A commercial crop cotton crop of 14,698,000 bales, compared with 11,290,000 bales the year before, is shown in the annual report issued by Secretary Hester, of the New Orleans Cotton Exchange.

World's consumption of American

cotton was put at 14,247,000 bales, against 11,242,000 bales the previous season, which left a carry-over of 2,880,000 bales, compared with 2,319,000 on July 31, 1924. Consumption figures proved nearly half a million bales larger than had been generally considered probable earlier in the season.

Cotton Cloth Exports From Japan

Japanese exports of cotton cloth during the five months, January to May, 1925, inclusive, amounted to 354,196,091 yards valued at 109,779,743 yen (the current exchange value of the yen averaged for this period approximately \$0.405), according to the Textile Division of the Department of Commerce. These exports comprised the following principal classes: Grey sheetings, 67,563,335 yards valued at 20,383,205 yen; grey shirtings, 102,323,236 yards, 33,707,642 yen; white shirtings, 26,278,591 yards, 9,177,448 yen; drills 47,464,203 yards, white shirtings, 26,273,511 yards, 9,177,448 yen; drills 47,464,203 yards, 14,902,984 yen; jeans, 53,699,438 yards, 17,844,463 yen; T-cloth, 27,531,269 yards, 7,696,361 yen; nankeens, 29,336,269 yards, 6,067,640 yen. The principal destinations of these exports were: India, 63,975,327 yards, 20,330,761 yen; Manchuria, 62,490,537 yards, 17,380,150 yen; Netherlands Indies, 35,556,372 yards, 11,278,058 yen; Tientsin, 24,534,152 yards, 8,274,927 yen; Egypt, 19,054,881 yards, 5,601,168 yen.

European Silk Congress

At meetings of the European Silk Congress held at Paris in June, resolutions were passed relative to the project for the adoption of a distinctive trade mark to accompany cocoons and silk goods of exclusively European origin, according to the Textile Division of the Department of Commerce. Emphasis was also placed on the necessity for keeping rayon interests in line as partners with natural silk rather than allowing them to drift into competition. This Congress is to be an annual event to secure an increasing measure of cooperation between all European silk interests, from the silkworm egg industry to the traveling salesmen handling finished products, uniting them into an organization powerful enough to compete in all of the world markets with the industries of Asia and America. The next session will be held in Milan in May, 1926.

**The Hartwell Mills No. 1.
Hartwell, Ga.**

8,080 spinning spindles; 216 looms.
H. O. Rogers.....Supt.
J. E. Yon.....Carder
J. M. Addison.....Spinner
A. R. Williams.....Weaver
J. H. Baker.....Cloth Room
Ben G. Scott.....Master Mechanic

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Cash refunds to policyholders, amounting to nearly \$13,000,000 since organization, have realized savings to them of at least 20% of the standard stock company insurance cost.

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Columbia, S. C.,	Columbia Paint Co., Inc.
Syracuse, N. Y.,	Paragon Plaster Co.
Utica, N. Y.,	American Hard Wall Plaster Co.
Rochester, N. Y.	F. P. Van Hoesen Co.

Cotton Mill Processes and Calculations

(Continued from Page 16)

how the splices are made in a manner to keep the thickness of the sheet uniform.

more than 10 inches in diameter. They are frequently provided with spring bottoms (especially in case of slivers as light as 40 grains per yard). These cans have a false bottom, supported by a spiral spring from the solid bottom of the can. This spring is so adjusted that when can is empty it holds the false bottom within about six inches of the top of can. As sliver is coiled into the can, the bottom is depressed so that top of coil is always about six inches from top of can. When the sliver is drawn out of the can at the next process, the bottom gradually rises, still keeping top of coil in about the same position. The purpose of this arrangement is to put on the sliver at all times the least possible strain. Combed sliver is much more tender than card sliver, by reason of the more parallel condition of the fibres.

55. The standard Heilmann comber is not provided with any stop motion to stop the machine in case any of the six laps should break or run out. The latest type of comber, however, has a stop motion for each head and one for the coiler, so that one operative is enabled to attend to eight eight-head combers with ease.

56. The process of combing is usually followed by two or three processes of drawing. The object of drawing (as will be explained in the next chapter), is to double a number of slivers into one and stretch them to straighten out the fibres and make the weight per yard more uniform.

The straightening out of fibres has already been well performed by the comber; and if the slivers delivered were in some way rendered more uniform, there would be very little use for drawing to follow.

Production.

57. The production of a comber depends upon the number of "nips" per minute, and upon the weight of sliver delivered.*

Average practice is 85 nips per minute for simple combers and 120 for duplex combers. These speeds may be increased 10 to 20 per cent. with extra skill and good stock. The average weight sliver is 60 to 70 grains per yard, and the production under these conditions would vary from 35 to 75 pounds per day of 10 hours for simple and from 50 to 90 for duplex combers. Some of the latest types of combers have a speed of about 100 nips with a production of about 125 pounds per day of 10 hours.

General Data.

58. A comber is generally supplied with tight and loose pulleys about 10x3, and run about 300 revolutions per minute. This varies with the make of the machine, on account of different methods of gearing it up. The real test of the speed is to so run the pulley that there will be about the right number of nips per minute, say about 85.

The modern six-head machines are used for the production of combed sliver from grades of cotton of $\frac{7}{8}$ inch to 1 3-16 inch staple. The eight-head machines are more adapted for producing a superior quality of work from grades of cotton of 1 3-16 inch or longer staple.

A six-head machine occupies a space about 3½ feet wide and 15 feet long, including the sliver can. An eight-head machine occupies a space about 3½ feet wide and 17½ feet long.

*The production is also in some degree dependent upon the length of fibre, because this in turn regulates the amount of stock fed forward at each nip.

The power required is about $\frac{3}{4}$ horsepower.

A sliver lap machine, including twenty 12-inch cans, occupies a space of about $4\frac{1}{4}$ feet by $10\frac{1}{2}$ feet. Pulleys are about 14 inches in diameter by $2\frac{1}{2}$ inches face and run about 100 revolutions per minute. The production per day of 10 hours, allowing 25 per cent. off for oiling, cleaning, etc., varies from 800 to 1,500 pounds.

A ribbon lap machine occupies a space about $4\frac{1}{2}$ feet by 8 feet. Pulleys are 16 inches in diameter by 3 inches face and run from 270 to 300 revolutions per minute. The production per day of 10 hours varies from 900 to 1,700 pounds.

One sliver lap machine and one ribbon lap machine (when ribbon lap machine is used) will supply about six combers.

59. Specifications for Combers.

Number of Machines _____
 Number of Heads in each Machine _____
 Leather Covers on Nippers or on Cushion Plates _____
 Kind of Cotton _____
 Length of Staple _____
 Per cent. of Waste Wanted _____
 Size of Cans _____
 Waste Cans, or Waste Lap Rolls _____
 Weight of Lap per Yard _____
 Weight of Sliver Delivered _____
 Total Draft _____
 Driven from Above or Below _____
 Size of Driving Pulley _____
 Speed of Same _____
 Nips per Minute _____
 Space Occupied _____
 Maker _____
 Purchaser _____
 Price _____
 Terms _____
 Remarks _____

Other Types of Combers.

60. Two other combers have been introduced from Europe into the United States. These are known as the "Montforts" and the "Mullhouse." These two machines have many points of similarity, but both are quite different from the Heilmann.

These machines were designed primarily for short staple cotton; but it is claimed that they will also comb long staple. They claim to occupy only one-fourth the space, require only half the attention, and produce twice as much as the Heilmann. The first cost is greater per machine, but somewhat less, considered with reference to output.

(Continued next Week)

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**There are three ways
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 to the high quality of**

HAWK THIN BOILING STARCH

1—Take our word for it.

**2—Ask the man who
 uses it.**

3—Try it yourself.

**We recommend No. 3. It
 is the most convincing.
 Only when you have
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 appreciate its many
 points of superiority.**

Now—is the time.

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QUALITY AND SERVICE SINCE 1866

An Explanation of Our Fifty Years of Dye House Experience

Some one has misinterpreted the statement made in our June Advertisement that "For More Than Fifty Years We Have Had Practical Dye House Experience."

To avoid any further possible misunderstandings we wish to explain:

That this business was incorporated in 1891 by John H. A. Klauder and Leonard Weldon. These men were the pioneer builders of practical dyeing machinery and the earliest knowledge we have of their applications for patents was in 1882, some 43 years ago.

But prior to 1882, both men had built dyeing machines for their own use and it was the clash of their ideas in the Patent Office that induced them to go into business together and incorporate the present concern.

Back of this were many years of experience that enabled them to reach the positions they held in the industry.

In our possession are patterns and drawings, as well as equipment used by these men, and a personnel, some of whom were directly trained by them. It is, therefore, an actual fact that back of the present business there is a vast accumulation of knowledge and experience dating back more than fifty years.

Now, as then, Klauder-Weldon Dyeing Machines are the best that material and money can build.

KLAUDER-WELDON DYEING MACHINE CO.

Originators • Pioneers • Leaders
BETHAYRES • PENNSYLVANIA

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Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Page	Page
—A—	—L—
Allis-Chalmers Mfg. Co. —	Keever Starch Co. —
American Cellulose & Chemical Mfg. Co. Ltd. 13	Klauder-Weldon Dyeing Machine Co. 27
American Laundry Machinery Co. —	Ladew, Edward R. Co. — 15
American Moistening Co. — 25	Liberty Mutual Insurance Co. — 27
American Schaeffer & Budenberg Corp. 34	Landers Bros. Co. — 38
American Textile Banding Co. —	Lane, W. T. & Bros. — 2
Amory, Browne & Co. — 36	Langley, W. H. & Co. — 36
Akron Belting Co. — 31	Leslie, Evans & Co. — 36
Arbol Mfg. Co. —	Lestershire Spool & Mfg. Co. —
Arnold, Hoffman & Co. —	Link-Belt Co. —
Ashworth Bros. — 42	Lockwood, Greene & Co. — 16
Atlanta Brush Co. — 27	Lowell Shuttle Co. —
Atlanta Harness & Reed Mfg. Co. — 31	—M—
—B—	Macrodi Fibre Co. —
Bahnsen Co. — 1	Marston, Jno. P. Co. — 37
Bancroft, Jos. & Co. —	Mathieson Alkali Works —
Barber-Colman Co. — 41	Mauney Steel Co. —
Blackmer Rotary Pump Co. — 32	Memphis Cotton — 35
Barber Mfg. Co. —	Marrow Machine Co. — 37
Bradley, A. J. Mfg. Co. — 37	Myles Salt Co. — 20
Borne, Scrymser Co. —	Mississippi Cotton — 35
Bosson & Lane — 27	Moreland Sizing Co. — 34
Brown, David Co. — 26	Morse Chain Co. — 43
Bond, Chas. Co. — 15	Mossberg Pressed Steel Corp. — 24
Brown St. Onge Co. —	—N—
Billington, Jas. H. Co. — 33	National Aniline & Chemical Co. —
Butterworth, H. W. & Sons Co. —	National Ring Traveler Co. — 37
—C—	Newburger Cotton Co. — 35
Carrier Engineering Corp. — 29	N. Y. & N. J. Lubricant Co. —
Catlin & Co. — 37	North Carolina Cotton — 39
Chicago Board of Trade — 17	Norwood Engineering Corp. — 35
Charlotte Leather Belting Co. —	—P—
Charlotte Mfg. Co. — 11	Page Fence & Wire Products Assn. 21
Chicago Fuse Mfg. Co. — 2	Paige, Schofield & Co. — 37
Cocker Machine & Foundry Co. —	Parker, Walter L. Co. —
Collins Bros. Machine Co. —	Parks-Cramer Co. — 3
Corn Products Refining Co. — 44	Page-Madden Co. —
Courtney, Dana S. Co. —	Penick & Ford, Ltd. — 33
Crompton & Knowles Loom Works —	Perkins, B. F. & Sons —
Crump, F. M. & Co. — 36	Plimpton Lift Truck Corp. — 34
Curran & Barry — 26	Puro Sanitary Drinking Fountain Co. —
Curtis & Marble Co. — 19	—R—
Cyclone Fence Co. —	Reeves Brothers, Inc. — 36
—D—	Republic Chemical Co. —
Dary Ring Traveler Co. — 23	R. I. Warp Stop Equipment Co. — 24
Davidson, Jos. L. Co. — 31	Rice Dobby Chain Co. — 31
Dixon Crucible Co., Joseph —	Roesler & Hasselacher Chemical Co. —
Dixon Lubricating Saddle Co. — 30	Rogers Fibre Co. — 10
Drake Corp. — 31	Root Co. —
Draper, E. S. — 24	Roy, B. S. & Son —
Draper Corp. —	—S—
Deering, Milliken & Co., Inc. — 36	Saco-Lowell Shops — 5
Dronsfield Bros. —	Sayles Finishing Plants —
Druid Oak Belting Co. — 25	Scott, Henry L. & Co. — 26
Dunlap Silk Corp. — 44	Seaboard Ry. —
DuPont de Nemours, E. I. & Co. — 9	Sellers, Wm. & Co. —
—E—	Seydel Chemical Co. — 35
Eclipse Textile Devices, Inc. —	Seydel-Thomson Co. —
Economy Baler Co. — 41	Siggers & Siggers — 31
Emmons Loom Harness Co. — 42	Sirrine, J. E. & Co. —
Engineering Specialties Corp. — 38	Slip-Not Belting Corp. —
Entwistle, T. C. Co. —	Sonneborn, L. Sons — 23
—F—	Sonoco Products —
Fafnir Bearing Co. —	Southern Ry. —
Ferguson Gear Co. — 20	Southern Spindle & Flyer Co. — 32
Fales & Jenks Machine Co. —	Stafford Co. —
Farish Co. — 24	Steel Heddle Mfg. Co. — 21
Ford J. B. Co. — 43	Stein, Hall & Co. — 29
Fournier & Lemoine —	Sydnor Pump & Well Co. — 31
Franklin Process Co. —	—T—
—G—	Terrell Machine Co. —
Grasselli Dyestuff Corp. — 25	Texas Cotton — 39
Garland Mfg. Co. —	Taylor Chas. — 33
General Dyestuff Corp. — 44	Textile Mill Supply Co. —
General Electric Co. —	Thomas Grate Bar Co. — 34
Georgia Webbing & Tape Co. —	Tolhurst Machine Works —
Graton & Knight Mfg. Co. —	Tripod Paint Co. — 38
Greensboro Loom-Reed Co. —	—U—
—H—	United Chemical Products Co. — 43
H. & B. American Machine Co. — 12	U. S. Bobbin & Shuttle Co. — 26
Hart Products Corp. — 20	U. S. Ring Traveler Co. — 41
High Point Loom Reed & Harness Co. —	Universal Winding Co. — 39
Hollingsworth, J. D. — 24	—V—
Hopedale Mfg. Co. —	Vactor Ring Traveler Co. —
Houghton, E. F. & Co. — 4	Vogel, Joseph A. Co. —
Howard Bros. Mfg. Co. —	Virginia Machinery & Well Co. — 31
Howard-Hickory Co. —	—W—
Hyatt Roller Bearing Co. —	Washburn Printing Co. —
—I—	Ridley, Watts & Co. — 37
International Salt Co. — 30	Wellington, Sears & Co. — 36
—J—	Whitin Machine Works —
Jacobs, E. H. & Co. —	Whitinsville Spinning Ring Co. — 20
Johnson, Oliver & Co. — 28	Williams, J. H. Co. — 2
Jordan Mfg. Co. — 14	Wolf, Jacques & Co. —
—K—	Woods, T. B. Sons Co. — 43
Kaumagraph Co. — 6	Wilts Veneer Co. — 31
	Woodward, Baldwin & Co. — 36

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Imports of Textiles Gain During Year

(Continued from Page 7)

at \$33,63,000 during 1924 and 136,095,000 square yards, with a value of \$29,641,000, during 1925. This decline in imports of British cloths is largely accounted for by the falling off in demand for imported broadcloths and poplins. American manufacturers are now able to produce this type of goods in qualities satisfactory to the consuming public, according to the trade press, which believe that broadcloths have made a place for themselves and that they will become a staple line in the American market.

United States consumption of cotton cloth has been greatly reduced within recent years by the vogue for silk and rayon fabrics. Although the use of cotton fabrics in the manufacture of automobile tires has helped to keep the per capita consumption of cotton goods at about the same level as in pre-war years, the demand for the better grades of of cotton piece goods, which constitute the bulk of the imports, has fallen off as a result of the competition from rayon and silk fabrics and the heavy imports of linens. During 1925 the United States purchased from other countries 24,133,000 pounds of woven fabrics of flax hemp, or ramie, valued at \$27,133,000, and 4,046,000 pounds of damasks and manufactures, with a value of \$6,145,000.

Imports of Manufactures of Wool and Silk

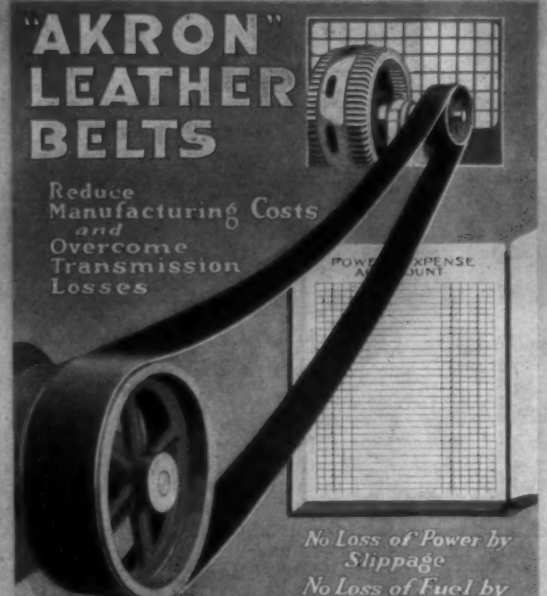
Imports of wool manufactures during 1925 were valued at \$56,579,000, comprising \$22,670,000 worth of wool fabrics, \$16,554,000 worth of carpets and rugs, and \$11,076,000 worth of wearing apparel, the balance including yarns and various other manufactures of wool. The United Kingdom is the chief source of the imports of wool fabrics, having furnished 8,106,000 pounds of woolsens, valued at \$14,850,000, and 742,000 pounds of worsteds, with a value of \$1,747,000, in 1925. China sent 720,189 square yards of carpets and rugs, valued at \$4,917,000, to the United States during 1925, while 566,135 square yards, with a value of \$4,987,000, came from Persia.

Indian Yarn and Cloth Production Increases.

Indian cotton mills produced 719,000,000 pounds of cotton yarn during the 12 months ended March 31, 1925, compared with 617,000,000 in 1923-24 and 705,000,000 in 1922-23. Consul W. L. Jenkins, Calcutta, reports to the Department of Commerce. The production of piece goods woven in Indian mills amounted to 1,970,446,000 yards valued at 594,800,000 rupees during 1924-25 as against 1,701,574,000 yards with a value of 529,600,000 rupees in 1923-24. (The value of the Indian rupee average \$0.3076 in 1923-24 and \$0.3321 in 1924-25). During 1924-25, imports of cotton piece goods amounted to 1,801,357,000 yards valued at 726,000,000 rupees compared with 1,46,806,000 yards worth 595,500,000 rupees in 1923-24.

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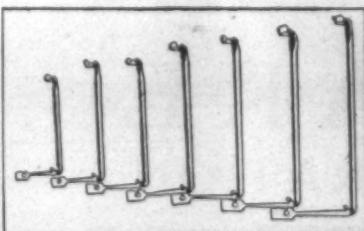
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Improvement in Humidifier Apparatus

(Continued from Page 12)

the accompanying drawings in which:

Fig. 1 is a view chiefly in vertical axial section showing the complete device, and

Fig. 2 is a section on the line 2—2 of Fig. 1.

An annular frame 5 is connected by brackets 6 with supporting rods 7 whose upper ends are adapted for connection to the ceiling or other support. A spider 8 is bolted to the frame 5 and sustains an electric motor 9 with its axis vertical and concentric with frame 5. The motor 9 receives current through the cable 10 and rotates a three-bladed fan 11, to produce a downward air current. The frame 5 also carries an up-standing sheet metal skirt 12 which is concentric with and surrounds the fan 11 and tends to prevent the frame and spider from disturbing the downward air current.

Suspended from the brackets 6, by means of two supporting rods 13 and brackets 14, is a circular pan 15 whose outside diameter is considerably greater than the diameter of the ring 5 and whose central portion is depressed and provided with a water discharge connection 16 to carry away excess water from the humidifier. The connection 16 is protected by a removable strainer 17 which rests in the central depression of the pan 15.

Mounted above the pan 15 and supported chiefly by a series of sheet metal spacers 18 is an annular trough or gutter 19. These spacers are V-shaped in horizontal cross section and have water ports 48 at their lower edges. At their tops they straddle drain ports 49 in the gutter 19, so that the gutter 19 is drained to pan 15 through the spacers.

The space intervening between the pan 15 and the gutter 19, serves for the discharge of the humidified air from the device and in order to deflect the air radially outward and eliminate large water drops an annular conical baffle 20 is removably mounted above the screen 17 on spacers 21. The outer margin of the baffle 20 is thus above the pan to permit the flow of eliminated water to the central depression and thence to the water outlet 16.

Water is supplied to the device by a pipe 22 through a stop valve 23 which is connected to a transverse pipe 24. This, as is clearly shown in Fig. 1, extends through one of the arms 6 across the ring 5 and is secured into a blind socket 25 in the opposite side of the ring. A T 26 is mounted on the pipe 24 at the center of the ring 5 and to this is mounted a nipple 27 which may be specially formed, as shown, to house a water strainer (not visible in the drawing). Mounted on the nipple 27 is a jet spray nozzle 28 whose exact form is not material to the invention, it being possible to use various different spray nozzles. That indicated at 28 is a well known type, hence need not be described in detail.

The pipe 24 supports a tubular air

duct 29 through whose walls it passes diametrically. Duct 29 is of considerably smaller diameter than fan 11 and extends approximately half way to the gutter 19. It is surrounded and continued by tubular extension 30 which telescopes thereover and terminates in a flaring bell 31. This bell 31 normally rests on the annular gutter 19 and serves as a support to the extension 30. The outer margin of bell 31 is slightly larger than the inner margin of gutter 19, so that the gutter collects water flowing down the inner surface of the bell.

A flaring skirt 32 surrounding the bell 31 is also rigidly mounted on the extension 30 and is so formed as to seat against the outer margin of the gutter 19 and exclude dust and lint from accumulating in the gutter. The fan 11 is larger in diameter than the duct formed by the members 29 and 30 and is so formed as to direct a relatively slow moving air current through the duct, and a faster moving annular parallel air current surrounding the duct.

The skirt 32 deflects the annular current just mentioned in an outward direction so that it flows outward and downward against the humidified air issuing radially from the space between the pan 15 and the gutter 19.

It will be observed that the duct composed of the members 29 and 30 is the essential means for guiding the air flow through the humidifier. In certain claims the invention describes this duct as exposed on its exterior to the free atmosphere to express the fact that, at and near the point of mixing of the two air currents, the outer air stream is not confined as it is in the conventional types of humidifier using an external or secondary duct. At the point of mixture the secondary or diluting stream of air may properly be described as a free flowing stream or a free current. Obviously the annular frame 5 and the skirt 12 might be regarded as exerting a slight confining action, but since these are at the top and closely adjacent the fan, they exert no material effect on the flow of air at or below the flaring skirt 32.

When the device is in use, water is supplied through the pipe 22 and valve 23 under pressure. This water is discharged from the spray nozzle 28 in a fine mist which fills the duct formed by the members 29 and 30. The fan 11 is driven at the same time and serves to force a relatively slow-moving current of air through this duct so that the air takes up and becomes surcharged with fine water mist. Some of the larger drops of the spray will strike the walls of the duct and flowing down the same will accumulate in the gutter 19. This water discharges through ports 49, spacers 18, and ports 48, so that it is kept from further contact with the air current until it reaches pan 15 near the edge of baffle 20, and thence flows to discharge through connection 16.

If the air current flowing down through the duct tends to take up any large water drops, these will be dashed against the baffle 20 or against the pan 15 as the air current changes its direction at the bottom

of the duct, and hence will be eliminated.

The device is so operated that the air discharged through the space between the pan 15 and gutter 19 is surcharged with finely divided mist, so heavily charged in fact, that unless this air were immediately mixed with additional relatively dry air there would be danger of precipitation.

The secondary free current delivered by the fan not only supplies a large part of this necessary air but it serves the useful purposes of overcoming any tendency of the discharging air to rise, and of inducing or accelerating the outflow of the moisture-laden air.

The effect is to permit the device to be operated at an unprecedentedly high evaporative rate on the basis of the size of the head. The slowly moving air current takes up an enormous burden of fine moisture particles under conditions most favorable to the rejection of large drops, and instead of delivering these fine particles into a confined current of limited volume, delivers them immediately into a relatively unconfined and very large volume of air into which they are swept at high velocity by the faster moving free air current. The fine mist thus leaves the head as soon as formed and separated from large drops, and being immediately brought into contact with a large volume of untreated air is disseminated through the air without danger of precipitation.

To clean the device the member 30 may be telescoped upward over the member 29, giving access to the baffle 20, gutter 19 and screen 17.

What is claimed is:

1. The method of humidifying air which consists in surcharging a confined current of air with finely divided moisture; discharging said surcharged air into the room whose air is to be humidified; and subjecting the discharging air at the point of discharge to a transversely directed, free flowing air current.

2. The method of humidifying air which consists in surcharging a relatively slow moving confined current of air with finely divided moisture; discharging said surcharged air into the room whose air is to be humidified; and subjecting the discharging air at the point of discharge to a transversely directed rapidly flowing free air current.

3. The method of humidifying air which consists in surcharging a relatively slow moving confined current of air with finely divided moisture; discharging said surcharged air in a general horizontal direction into the room whose air is to be humidified; and subjecting the discharging air to a downward and outward rapidly flowing free air current.

4. The method of humidifying air which consists in producing a relatively slow moving confined current of air which moves downward and then discharges substantially horizontally into the room whose air is to be humidified; surcharging said confined current with finely divided moisture and subjecting the discharging air to a rapidly moving free air current directed obliquely

downward and in the general direction of flow of said discharging air.

5. In a humidifier, the combination of a vertical duct exposed on its exterior to the free atmosphere, means for spraying water into the air in said duct, a pan spaced from the bottom of said duct in position to collect precipitated water and to direct radially outward air discharging from the bottom of the duct, a fan serving to force air downward through said duct and also downward around said duct in an annular unconfined current; and a flaring deflector serving to direct such annular current obliquely downward and outward into the air discharging from the interval between said duct and pan.

6. The combination with a humidifier including a vertical duct exposed on its exterior to the free atmosphere and water-spraying means mounted within the duct, said duct being arranged to discharge humidified air horizontally outward in a radially flowing annular stream at the lower end of the duct; of a fan arranged to force air downward through said duct and also in a free downward flowing annular stream serving to mix with and depress the humidified air radially discharging from the lower end of said duct.

7. In a humidifier, the combination of a duct exposed on its exterior to the free atmosphere; means serving to produce a water spray within said duct; a direction changing baffle located in the path of air through said duct beyond said spray and arranged to eliminate large water-drops from the air current, permitting fine drops to pass; means for withdrawing the eliminated water; a fan arranged to force air through said duct and in an annular free current outside said duct; and means causing said currents to mix as the first current issues from said duct.

8. In a humidifier, the combination of a vertical duct exposed on its exterior to the free atmosphere; means for spraying water into the air in said duct; a pan spaced from the bottom of said duct in position to collect precipitated water and to direct radially outward air discharging from the bottom of the duct; a fan serving to force air downward through said duct and also downward around said duct in an annular unconfined current; and a flaring deflector serving to direct such annular current obliquely downward and outward into the air discharging from the interval between said duct and pan after such air has passed from confinement thereby.

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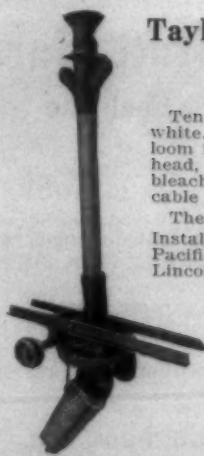
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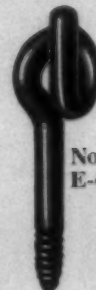
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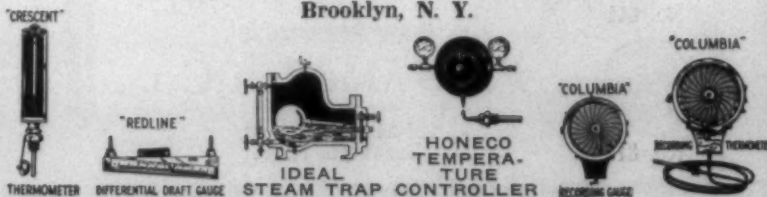
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Weaving Artificial Silk

(Continued from Page 10)

rabbit skin bed should extend from the shuttle eye to the base of tube, and when nicely inserted, and properly fixed, is both effective and enduring, as the tension can easily be regulated by raising or lowering the shuttle peg. It gives a perfectly even drag, prevents the yarn from flying forward, and presents no rough surface to fray the fibre. A simple and effective method of preventing the weft from flying up and touching the greasy spindle and of keeping the weft in contact with the rabbit skin or velvet, is to insert two small pegs of about 1/4 inch in thickness in the top of the shuttle between the pot-eye and the nose of the shuttle peg.

The picker should be kept perfectly smooth so as to present nothing on which the weft can catch in the box; while the front of the shuttle box may be covered with soft, smooth cotton cloth if there is any tendency either to cut or to shuttle-mark the weft. If these points receive careful attention, there will be little difficulty in weaving goods containing artificial silk weft.

The difficulties which arise when weaving artificial silk warps are of a totally different character, and chiefly arise from threads being at different tensions in the same warp, or from broken fibres which slide along the yarn and cause lumps or runners that break down the neighboring threads and cause faulty weaving. Whenever possible it is best to have the yarn warped and sized directly on to the weaver's beam, as this saves handling, and the risk of making slack and tight places on the warping mill and of uneven matching in the dressing or beaming.

Some of the folded yarns which have had a fair amount of twist put into them will often weave well without sizing, providing the doubling is well and evenly done; but as the twist destroys some of the lustre, folded yarns are only used for special effects, for dry finished goods, or by those who do not know how to get the best results. The single soft twisted yarns are most lustrous, and look fuller in the cloth; but they must be very well sized or the fibres become badly broken and frayed. In its sized condition the yarn looks thin and wiry, but when the size has been washed off in the dyeing and finishing processes, the threadiness disappears and the yarn bursts open, allowing

the fibres of the different threads to lie very close together.

Sized warps which have to be kept in stock for some time should be carefully stored in a dry place, as the size which is used is very susceptible to dampness. Many of the manufacturers who have failed to weave artificial silk warps have done so because their store rooms or weaving sheds were not kept sufficiently dry. Attention should next be directed to gaiting the warps so that all undue friction is avoided in the weaving. In order to obtain this result the threads from the ground and artificial silk warps must be made to come off their respective beams, parallel with each other, so that they will fit into their respective places in the pattern without rubbing each other.

Artificial silk yarn is very strong when perfectly dry, and will stretch a good distance, but it is non-elastic, and does not spring back to its normal length when the strain is removed. This makes it necessary to exercise care in tensioning the warp, and if possible the beam and back rail bearer should be made to oscillate slightly with the opening and closing of the shed. The faults which arise from the over-tensioning of the warp are breakages of fibres and the consequent runners on the yarn, flat and thready looking figures, and slack and tight threads in the shed.

Some weavers have difficulty in tying up a broken thread with a knot that will weave well in the reed, and have a habit of weaving broken threads long enough before taking them in. This causes a tension knot and a great amount of mending in the piece room, and should be avoided by teaching the weaver how to tie a small, firm, and non-slipping knot, formerly referred to as the "tension" knot.

The friction of the shuttle upon the artificial silk yarn should be avoided as far as possible by weaving the figure with the warp on the face of the cloth, and by lifting the figuring warp a little higher and depressing it a little lower than the ground warp. But on no account should it be allowed to press on the going part, nor be subjected to over-shedding. The shedding should be also timed to avoid a large amount of friction in the warp by the beating up of the weft on a closed shed. Most of the experienced firms in weaving artificial silk use swans-down along the shuttle face to reduce friction to a minimum. This material, seccotined to the flat of shuttle-race, gives very effective results.—Yorkshire Evening Argus.

Morland Size, Inc.

"The Warps Best Friend"

Moreland Sizing Company

Established 1908

Office: 206 Andrews Low Bldg.

Spartanburg, S. C.

S. C. THOMAS & J. T. MORELAND, Owners

Clark's Cotton Records

Government Reports.

	1925	1924	1923
Acreage this season	40,403,000	38,709,000	34,016,000
Indicated crop July 25	12,144,000	11,412,000	11,065,000
Indicated crop middle of July	11,934,000		
Indicated crop end of July	12,351,000	11,516,000	11,449,000
Indicated crop middle of Aug.	12,956,000		
Indicated crop end of Aug.	12,787,000	10,788,000	10,575,000
Indicated crop middle of Sept.	12,596,000		
Indicated crop end of Sept.	12,499,000	11,015,000	10,135,000
Indicated crop middle of Oct.	12,675,000		
Indicated crop end of Oct.	12,816,000		
Indicated crop middle of Nov.	12,992,000		
Indicated crop end of Nov.	13,153,000		
Ginned to Oct. 1st	4,527,871		
Ginned to Oct. 18th	7,600,826	6,415,145	6,078,321
Ginned to Nov. 14th	11,163,400		
Ginned to Dec. 1st	12,225,000		
Ginned to Jan. 16, 1925	13,308,037		
Ginned to March 20 (final report)	13,618,751		
Carryover beginning cotton year	2,319,000	2,573,000	4,879,000

Cotton Exports.

Following is a comparison of the exports by months in running bales, including linters:

	1924-25.	1923-24.	1922-23.
August	277,641	244,415	272,808
September	737,010	689,435	378,390
October	947,556	781,722	798,664
November	1,306,000	770,002	858,337
December	1,076,000	845,581	607,853
January, 1925	1,076,000	546,253	473,436
February	818,838	482,146	359,657
March	734,697	332,168	318,210
April	472,555	320,774	259,984
May	330,967	326,357	160,368
June		230,979	214,851
July		211,633	171,469
	5,772,000	4,864,027	

American Consumption of All Kinds of Cotton, Excluding Linters. (In running bales, 000s omitted.)

	1924-25		1923-24		1922-24	
	Per Month	Per Season	Per Month	Per Season	Per Month	Per Season
August	357	357	492	492	526	526
September	435	792	484	975	494	1,020
October	530	1,322	542	1,517	534	1,554
November	492	1,814	532	2,049	579	2,133
December	533	2,347	462	2,510	529	2,663
January 3	589	2,936	577	3,088	610	3,273
February, 1925	550	3,486	508	3,595	567	3,840
March	582	4,068	484	4,079	624	4,464
April	597	4,665	480	4,559	577	5,041
May	531	5,196	414	4,991	621	5,661
June	493	5,689	350	5,341	542	6,203
July			347	5,688	463	6,666

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Print Cloths, Twills, Pajama Checks,
Sheetings, Combed Peeler Yarns

Cotton Goods

New York.—The cotton goods markets were steady throughout the week. Sales were moderately large. Mills making print cloths and sheetings are well sold for the next six weeks are more. Sales of 30,000 pieces of voiles and 25,000 pieces of broadcloths were reported during the last two days of the week.

Buyers took more print cloths and sheetings during July in spite of the conflicting reports in the cotton market. While the markets were rather quiet during last week, they reflected the improvement of the past two weeks. Mills were unwilling to shade prices. Spot sales of 80 square print cloths were made at the close of the week at 12½ cents and contract prices in some quarters were quoted at the same price.

Sheetings sold well in small lots. Trading was done in 48 square, 4-yard at 9½ cents; 4.70-yard, 8½ cents; 5-yard, 8½ cents, and scarce at the price; 6.15-yard, 7 cents.

There were sales of drills with 37-inch 3-yard sold at 12½ cents; 3.95-yard, 10 cents; 34-inch 4.75-yard, 8½ cents. Pajama checks were to be found at 10½ for the 72x80s and 8½ cents for 64x60s.

Trading in fine goods was quiet. Many lines of various novelties in cotton and rayon are expected within a short time. There were fairly good spot sales of carded broadcloth.

The market for tire fabrics was rather quiet during the week. There were some small sales of spot goods and there were indications that business is improving sufficiently so that some manufacturers are anticipating deliveries.

In the cotton duck market, conditions were reported as very satisfactory. There were numbers of good sales for both prompt and future delivery and most mills are in a considerably better position than they were several weeks ago.

There was said to be the prospect of mills running on twills going off the construction because of the relatively poorer prices they were bringing compared with print cloths. Inventories of twills were down to a healthy basis, it was said, and the section in better shape than it has been the case in over a year.

John V. Farwell Company, Chicago, say in their Weekly Review of Trade "Wholesale dry goods shipments are in excess of corresponding week last year. Road orders are about the same as during final week

in July, 1924. Prices of raw flax have stiffened considerably during past four weeks. Tow yarns also show slight advance. Stronger cotton and cotton goods market. Mills have advanced price on some blankets. Buyers in market in larger numbers than during July of last year. Collections fair."

Sateens and twills continued in goods demand in the Fall River cloth market throughout the week for deliveries running well through September, but purchases have been only moderate. The inquiry has been for the wide and narrow goods of print cloth construction. It is doubtful if the week's sales will total in excess of 65,000 pieces.

Prices show an advance on several styles of from ¼ to ½ cents over last week's quotations and due largely to the scarcity of spots in many constructions and the belief that they will continue to be scarce for some time, providing the cotton market holds its present strength.

Many of the mills are short of cotton and have declined contracts as they contend that they cannot afford to buy cotton on the present price basis and make any profit. For this reason curtailment continues about the same as for the previous week and is liable to be continued until cotton becomes cheap enough to encourage buying.

German Textile Trade With Great Britain.

Textiles occupy the most important position in the interchange of goods between Germany and Great Britain, accounting for 39 per cent of the total value of the German imports from Great Britain in 1924 for 23 per cent of the total value of German exports to that country in the same year, Consul C. T. Steger, advises the Department of Commerce from Dresden. Great Britain also occupies a most position, both as a source of origin of German textile imports and as a value of textile imports and as a market for German textile goods, furnishing 25 per cent of the total value of textile imports into Germany and taking 40 per cent of Germany's textile exports. The most important items of exports to Great Britain are silk materials, cotton knit goods, wool clothing materials, cotton laces and embroideries. The more important classes of textiles imported from that country into Germany are fine cotton and worsted yarns, cotton cloth and carded wool.

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OF ST. LOUIS, MO.

P. H. PARTRIDGE, Agent, Charlotte, N. C.

Extra staples, and good 1 1-16 and 1½ cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.

The Yarn Market

Philadelphia, Pa. — While the higher cotton markets were responsible for advancing prices in the yarn market in the early part of the week, prices showed a weakening tendency before the week closed. Mills generally maintained prices on a very firm basis, but cheaper years offered in some quarters of the market here. Buyers were hesitant over prices and apparently content to await further development in the cotton situation before considering anything like large yarn contracts.

There were some inquiries from buyers concerning yarn for future delivery, but they were only willing to buy at their own prices which were generally from 2 to 4 cents under what mill would accept.

Fine yarn spinners in Gaston county reported first sales of yarn from new crop cotton, some contracts having been handled calling for delivery in October, November and December, chiefly on mercerizing yarns. They reported heavy inquiry, but at prices that spinners would not accept. Practically all of the combed yarn mills report sufficient business on hand to carry them to the end of the old crop year and are accepting orders only when they show a margin of profit. Mill stocks in Gaston are reported very low, and inquiry from buyers indicates they are carrying very small stocks.

Yarn prices in this market were published as follows:

Southern Two-Ply Chain Warps.	
2-ply 8s. 39 a.	2-ply 26s. 45 a.
2-ply 10s. 39 1/2 a.	2-ply 30s. 46 1/2 a.
2-ply 16s. 41 a.	2-ply 40s. 57 a.
2-ply 20s. 41 a.	2-ply 50s. 68 a.
2-ply 24s. 44 a.	
Southern Two-Ply Skeins.	
8s. 38 a.	40s. 56 a.
10s. to 12s. 38 1/2 a.	40s. ex. 60 a.
14s. 39 a.	50s. 68 a.
16s. 40 1/2 a.	60s. 72 a.
20s. 40 1/2 a.	72 a.
24s. 44 a.	Tinged Carpet—
26s. 44 1/2 a.	3 and 4-ply 35 a.
30s. 46 a.	White Carpet—
36s. 54 a.	3 and 4-ply 37 a.
Part Waste Insulated Yarn.	
6s. 1-ply 34 a.	12s. 2-ply 37 a.
8s. 2, 3 and 4-ply 35 1/2 a.	20s. 2-ply 40 a.
10s. 1-ply and 3-ply 36 a.	26s. 2-ply 44 a.
	30s. 2-ply 45 a.
Duck Yarns.	
3, 4 and 5-ply 37 1/2 a.	3, 4 and 5-ply 40 a.
16s. 38 1/2 a.	16s. 40 a.
12s. 39 a.	20s. 42 a.
Southern Single Chain Warps.	
10s. 38 a.	24s. 43 a.
12s. 39 a.	26s. 44 a.
14s. 39 1/2 a.	30s. 46 a.
16s. 40 a.	40s. 55 a.
20s. 41 a.	
Southern Single Skeins.	
6s. to 8s. 38 a.	20s. 40 a.
10s. 38 1/2 a.	22s. 41 a.
12s. 39 a.	24s. 43 a.

14s. 39 1/2 a.	26s. 43 a.
16s. 40 a.	30s. 45 a.
Southern Frame Cones.	
8s. 38 a.	22s. 41 a.
10s. 38 a.	24s. 43 a.
12s. 38 1/2 a.	26s. 44 a.
14s. 39 a.	28s. 45 a.
16s. 39 a.	30s. 46 a.
18s. 40 a.	30s. tying in 44 1/2 a.
20s. 41 a.	40s. 58 a.
Southern Combed Peeler Skeins, Etc.	
2-ply 16s. 56 a.	2-ply 50s. 80 a.
2-ply 20s. 58 a.	2-ply 60s. 87 1/2 a.
2-ply 30s. 65 a.	2-ply 70s. 102 1/2 a.
2-ply 36s. 70 a.	2-ply 80s. 112 1/2 a.
2-ply 40s. 75 a.	
Southern Combed Peeler Cones.	
10s. 48 a.	30s. 60 a.
12s. 49 a.	32s. 62 a.
14s. 49 1/2 a.	34s. 65 a.
16s. 52 1/2 a.	36s. 67 a.
18s. 51 a.	38s. 69 a.
20s. 52 a.	40s. 70 a.
22s. 53 a.	50s. 75 a.
24s. 56 a.	60s. 87 1/2 a.
26s. 56 1/2 a.	70s. 97 1/2 a.
28s. 57 a.	80s. 110 a.
Eastern Carded Peeler Thread—Twist Skeins.	
20s. 2-ply 50 a.	36s. 2-ply 63 a.
22s. 2-ply 51 a.	40s. 2-ply 65 a.
24s. 2-ply 56 a.	45s. 2-ply 70 a.
30s. 2-ply 59 a.	50s. 2-ply 75 a.
Eastern Carded Cones.	
10s. 41 a.	22s. 44 a.
12s. 42 a.	26s. 51 a.
14s. 43 a.	28s. 53 a.
20s. 47 a.	30s. 55 a.

Yarn Spinners' Bulletin

The weekly bulletin of the Southern Yarn Spinners Association says:

Market conditions are reported as quiet; no demand except in small quantities for immediate delivery. Prices to some extent reflect the advance in the cotton market and are generally reported at an advance of from 1 to 1 1/2 cents per pound over last week's level. Trading however is quiet, consumers being unwilling to anticipate their wants and supplying their needs entirely by hand-to-mouth purchases.

The situation for supplies of cotton is acute. The New York spots quotations do not reflect the actual price of cotton by a material difference. In view of the slack demand and the uncertainty of the future market, spinners would be ill-advised to bull the spot market by endeavoring to secure spinnable cotton with no prospect of being able to sell yarn at anything approximately replacement value. The situation is at a deadlock. The only solution is curtailment of the yarn supply until a market is created. Any accumulation of stocks would be speculative in the extreme, and unless made from cotton at materially less than today's reported values would be to invite a considerable manufacturing loss.

Material curtailment until demand is stimulated is the logical course for the spinner to pursue.

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Cuts 1/2 in. Letters
Lines—Any Length

Want Department

Wanted

Position as electrician for textile plant or power house. Have had several years' experience on motors in cotton mills. Have also had experience in repair shops rewinding motors. Thirty years old and married. Address N. C. T., care Bulletin.

Wanted

Cotton yarn salesmen to sell converted Rayon silk yarns as side line for large N. Y. House. One who has a large following among the cotton and hosiery mills. State territory and commission expected. Box R. S. 464, 206 Fitzgerald Building, New York City.

Wanted

Position as overseer of carding and spinning, winding, spooling, warping. 20 years' experience. Age 44, married. 7 years with present company. References. Address T. G. H., care Southern Textile Bulletin.

Help Wanted

We need one fixer for 70 Lowell looms on light weight sheetings and one for 80 Staffords, same kind of goods. Mill running 55 hours week regularly. Address P. J. Long, Overseer Weaving, Bonham, Texas.

Wanted

Position with mill or cotton merchant as cotton buyer or receiver. Have had ten years' experience buying, grading, stapling and receiving. Am at present employed by small mill. Reason for desiring a change, I wish a chance for advancement. Can give gilt-edge references and bond. Address Cotton Grader, care Southern Textile Bulletin.

Personal

Mr. Hollingsworth, of Greenville, S. C., the cotton card Licker-in man, might learn something of interest, if he will get my address. He can get my address by writing B. M., care Southern Textile Bulletin.

Wanted

Position as superintendent of a yarn or cloth mill. 25 years' experience on fine yarns and cloth. Have no bad habits, and can get results. Now employed but want a larger job. Excellent reference. Address H. P. W., care Southern Textile Bulletin.

Practical Mill Devices Developed and Marketed Engineering Specialties Corporation

520 So. Elliot Street,
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Wanted to Purchase

Carpet Yarn Spinning Mill, 5,000 to 8,000 spindles, manufacturing 8-1, 8-2, 8-3 and 8-4 ply yarns suitable for carpet trade put on tubes and skeins. Must be going concern, modern and reasonable in price. Prefer plant in North Carolina but would consider other locations. Address C. K. Taylor, P. O. Box 187, Magnolia, Miss.

\$25.00 REWARD will be paid for the apprehension or such information that will lead to the apprehension of Earnest L. McCoy. Height about 5½ ft., weight about 140 lbs., dark complexion and black hair. Left Hickory on or about the 22nd day of June, 1925, wearing a dark blue striped suit, brown hat, and is an employee of spinning mills. Superintendents and overseers take note. Wire Chief Police, Hickory, N. C., or John C. Stroupe, Hickory, N. C.

Wanted to Purchase

Good Model E Warp Tying-in Machine. Address "Warp," care Southern Textile Bulletin.

For Sale

Model K Barber Warp-Tying Machine (for tying warps behind looms), reconditioned, practically as good as new. Address "Bar-gain," care Southern Textile Bulletin.

Notice

Will party who wishes to exchange Model E (large) Barber Warp-Tying Machine for Model K (to tie behind looms) please address "Model E," care Southern Textile Bulletin.

Wanted

Position as traveling salesman in the textile line by experienced mill man now employed as overseer in fancy broadcloth weave room. Communicate with C. V. W., care Southern Textile Bulletin.

Wanted

By Aug. 10th, knitting machine fixer for S. & M. H. H. Machine and Geo. D. Mayo. Box A, Landrum, S. C.

Wanted at Once

One experienced looper for 220 needle men's half hose, at six and one-half cents per dozen, on new machine. Box A, Landrum, S. C.

Wanted at Once

Capable young man to keep set of mill books and do general office work. Box A, Landrum, S. C.

Wanted

A 5,000 spindle mill equipped with four process of roving and combers that is willing to contract for a constant run on a high grade product. Want privilege specifying cotton that mill must use, and organization from which yarn is to be made. After organization operating mill have full specifications, and yarns have been produced which will constitute standard samples, quality must be guaranteed to equal said samples. Address E. R., care Southern Textile Bulletin.

Position Wanted

Young carder wishes to make change. No night work or small job considered. Job in Alabama preferred. Textile education. Address Carder A-1, care Southern Textile Bulletin.

Man Wanted

To take charge of Southern artificial silk processing plant. Must be thoroughly familiar with sizing artificial silk warps, lapping and coning. Give past experience and full particulars. Address M. L. B., care Southern Textile Bulletin.

Wanted

Second hand for dye house. Must be experienced on long chain dyeing. Address Cramerton Mills, Cramerton, N. C.

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36" 48x48—5.50 40" 56x60—3.60

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- 1—Kitson Card and Picker Waste Cleaner.
- 32—40" Lowell Cards, 12" coilers, 27" doffers.
- 48—Deliveries Whitin Drawing, metallic rolls.
- 3—80 spindle Providence Slubbers, 12x6.
- 6—96 spindle Woonsocket Intermediates, 10x5.
- 4—152 spindle Woonsocket Speeders, 8x4.
- 3—160 spindle H. & B. Speeders, 7x3½.
- 10—216 spindle Whitin Spinning Frames, 3¼" gauge, 7" traverse, 2" rings.
- Roving Cans, 12" and 10"x36".
- 12" Slubber Bobbins.
- 10" Intermediate Bobbins.
- 7" and 8" Speeder Bobbins.
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- Roving Cars, Platform Scales, Trucks, Roving and Yarn Reels and Scales, Card Grinders, 5 extra Sets Flats, also Card Clothing Machine.
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- 1—16"x8' bed Screw Cutting Lathe.
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